FOR ARGUMENT

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IN THE

Supreme Court of the United States

S.D. WARREN COMPANY,
Petitioner,

v.

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION,
Respondent.

On Writ of Certiorari to the Maine Supreme Judicial Court

BRIEF *AMICUS CURIAE* OF WATER QUALITY AND RIVERINE SCIENTISTS IN SUPPORT OF RESPONDENT MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

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INTERESTS OF *AMICI CURIAE*

Amici curiae are scientists specializing in the scientific study and management of rivers and reservoirs. They have professional interests in assuring that federally licensed dams and other project works which generate electricity are designed, operated, and maintained in a manner that contributes to attainment of water quality standards for the affected navigable waters.[1] *Amici* respectfully submit this brief to aid in the Court's understanding of two topics: first, how such projects may adversely affect the physical, chemical, and biological integrity of waters protected by water quality standards; and second, how States use the unique authority granted by Clean Water Act section 401 to prevent or mitigate such adverse impacts, through mandatory conditions in the licenses which the Federal Energy Regulatory Commission issues for such hydropower projects under the Federal Power Act Part I. Counsel of record for all parties consented to the filing of this brief.[2]

SUMMARY OF ARGUMENT

Clean Water Act (CWA) section 401(a)(1), 33 U.S.C. § 1341(a)(1), applies to "any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters . . ." and which is subject to federal permit or licensing. By plain meaning, "any discharge" includes the mere discharge of water, and "facilities" include existing hydropower projects

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[1] The qualifications and positions held by *Amici* are set forth in Appendix A, which is bound with this brief. Individual *Amici* appear here in their individual capacities as scholars and scientists, not as representatives of any institutions with which they are affiliated. This brief has been financed by *Amici*, with support from the C.S. Mott Foundation. No counsel for any party authored this brief, in whole or in part. No party made a monetary contribution to the brief.

[2] Letters of consent have been filed with the Clerk.

licensed by the Federal Energy Regulatory Commission ("FERC").

Each hydropower project controls incoming flow of water and directs such flow through a powerhouse. It thus affects the physical volume and pattern of flow, both in the reservoir and downstream; the chemistry of such water; and the availability and suitability of habitat for aquatic life. Section 401(a)(1), 33 U.S.C. § 1341(a)(1), authorizes the State where the discharge occurs to certify that the discharge will comply with water quality standards which the State has adopted under Section 303(c), 33 U.S.C. § 1313(c), for the affected waters. Under Section 401(d), 33 U.S.C. § 1341(d), a certification sets forth conditions necessary to assure that the facility as a whole attains the water quality standards.[3] *See PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, 511 U.S. 700, 711 (1994). Such conditions are incorporated into any license which FERC issues for a project under Federal Power Act Part I ("FPA"), 16 U.S.C. §§ 791 *et seq. Jefferson PUD*, 511 U.S. at 724; *American Rivers, Inc. v. FERC*, 129 F.3d 102 (2nd Cir. 1997).

The FPA otherwise preempts a State's authority to condition such a license.[4] *First Iowa Hydro-Electric Coopera-*

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[3] "Section 401(d) provides that any certification shall set forth 'any effluent limitations and other limitations . . . necessary to assure that *any applicant*' will comply with various provisions of the Act and appropriate state law requirements." *Jefferson PUD*, 511 U.S. at 711 (*quoting* 33 U.S.C. § 1341(d)) (emphasis added). Section 401(d) "author[izes] additional conditions and limitations on the activity as a whole once the threshold condition [stated in Section 401(a)], the existence of a discharge, is satisfied." *Id.* at 712. EPA's regulations implementing Section 401, 33 U.S.C. § 1341, expressly require a State to find that "there is reasonable assurance that the *activity* will be conducted in a manner which will not violate applicable water quality standards." *Id.* (*quoting* 40 C.F.R. § 121.2(a)(3)) (emphasis added).

[4] The FPA does not preempt a State's authority to: (A) issue and regulate water rights as necessary for project operation and to prevent injury to

tive v. Federal Power Commission, 328 U.S. 152, 181 (1946) ("The detailed provisions of the Act providing for the federal plan of regulation leave no room or need for conflicting state controls."); *California v. FERC*, 495 U.S. 490, 506 (1990). Section 401 is the States' only authority to assure that existing projects that discharge water flow (and not pollutants) will not cause violation of applicable water quality standards. Since 1970, States have conditioned licenses in this manner, thus assuring attainment of those standards consistent with continued electricity generation and other beneficial uses. *See, e.g., Pacific Gas and Electric Company*, 97 F.E.R.C. ¶ 61,031 (2001) (new license for P. No. 137 subject to 1976 certification). Since 1995, 28 States have certified the relicensing of 149 existing projects. *See* Appendix B.[5]

ARGUMENT

Petitioner S.D. Warren Company ("Warren") owns and operates hydropower projects on the Presumpscot River in Maine. Petitioner's Brief on Merits ("Pet. Br.") at 3. The original licenses for five of these projects expired on January 26, 2001. Warren filed timely applications with FERC for new licenses. *Id.* Warren requested certifications from the Maine Department of Environmental Protection ("Maine

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prior water rights (FPA section 27, 16 U.S.C. § 821); (B) regulate retail rates for electrical service (FPA section 19, 16 U.S.C. § 812); and (C) authorize a State or municipal agency to take over any licensed project, through a condemnation proceeding and on payment of fair market value (FPA section 14(a), 16 U.S.C. § 807(a)).

[5] *Amici* compiled this appendix through Westlaw to identify all licenses that FERC issued between November 30, 1995, and November 30, 2005. In this appendix, and consistent with FERC's terminology, "original" means the initial license for a project. "New" means a license issued pursuant to FPA section 15, 16 U.S.C. § 808, upon expiration of an original license. "Subsequent" means a license issued upon expiration of an original license in which FERC waived the applicability of FPA section 15, typically for a minor project. The difference between a new or subsequent license is immaterial to this case.

DEP") under protest. *Id.* at 9. On April 30, 2003, Maine DEP issued certifications which purport to regulate Warren's operations and recreational facilities. *Id.* at 4; Petitioner's Appendix ("Pet. App.") at A-74. On October 2, 2003, FERC issued new licenses which incorporate the certifications. *S.D. Warren*, 105 FERC ¶ 61,013 (2003). Warren now challenges the authority of Maine DEP to certify these projects under CWA section 401, 33 U.S.C. § 1341.

Warren interprets Section 401(a)(1), 33 U.S.C. § 1341(a)(1), to apply to an existing dam only if it adds pollutant from an outside source, such as grease or debris from a construction activity. Pet. Br. at 14-16. Under this interpretation, the section would not apply to Warren's or any other projects as a result of the discharge of "mere flow" of water for electricity generation. *Id.* at 15. Warren does not acknowledge the voluminous scientific record—developed by the U.S. Environmental Protection Agency ("EPA") since the early 1970s and submitted to Congress—which unequivocally shows that existing dams which discharge "mere flow" may impair the physical, chemical, and biological integrity of the waters which the Clean Water Act otherwise protects. *See* EPA, *Impact Of Hydrologic Modifications On Water Quality* (1975) [hereinafter *1975 Dam Report*]; EPA, *Dam Water Quality Study: Report To Congress* (1989) [hereinafter *1989 Dam Report*]; EPA, *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* Ch. 6 (1993) [hereinafter *1993 Dam Report*]. [6] The fundamental question raised by this case is whether the Clean Water Act permits States to protect water quality, including designated beneficial uses of water supply as well as fish and wildlife, from the adverse impacts of "any discharge" by federally licensed hydropower projects.

These existing projects are not regulated under National Pollutant Discharge Elimination System ("NPDES") permits

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[6] *Amici* follow the naming convention of *National Wildlife Federation v. Gorsuch*, 693 F.2d 156, 163 n. 13 (D.C. Cir. 1983).

under Section 402, 33 U.S.C. § 1342. That section applies to point sources that discharge pollutants, as defined in Section 502(12), 33 U.S.C. § 1362(12). The parties agree that these projects, like many other existing hydropower projects, do not discharge pollutants and thus are not subject to permitting under Section 402 incident to relicensing. Section 304, 33 U.S.C. § 1314, and Section 208, 33 U.S.C. § 1288, which Warren cites as applying to existing dams (Pet. Br. at 24-25), also do not mandate permits or other limitations for dams such as Warren's that do not discharge pollutants.

On its face, Section 401 applies to any federally licensed activity that may discharge into navigable waters. By plain meaning, "any discharge" (33 U.S.C. § 1341(a)(1)) applies to the discharge of flow by an existing hydropower project. This is how the States, FERC, and EPA have interpreted the section. Between November 1995 and November 2005, States used this authority to certify 76% of the projects that FERC relicensed, while waiving certifications for the remainder. *See* Appendix B.[7] These certifications establish individualized conditions for these existing projects, as necessary to enhance baseline conditions permitted by the original licenses and otherwise attain all water quality standards in the affected waters.

I. THE DISCHARGE OF "MERE FLOW" MAY HAVE SIGNIFICANT IMPACTS ON WATER QUALITY.

Warren acknowledges that dams affect water quality. Pet. Br. at 23-24. It claims that Congress addressed impacts from dams as non-point sources via Clean Water Act section 304(f)(2)(F), 33 U.S.C. § 1314(f)(2)(F), which requires EPA to develop information on procedures and methods to control non-point pollution, and Section 208, 33 U.S.C. § 1288,

[7] States have not denied certifications for any such projects during this period.

which requires areawide waste treatment plans in urban areas. *Id.* at 25. Petitioner does not identify any Clean Water Act authority, other than Section 401, whereby a State lawfully may establish operational limitations and other mandatory conditions in a federal license for an existing project that results in discharge of "mere flow" but not pollutants (Pet. Br. at 15) into navigable waters. It thus seeks to deregulate such discharges under the Clean Water Act, on the implicit theory that the statute establishes mandatory operational limitations only for point sources of pollutants. The record developed by EPA, as well as other aquatic, riparian, and wetlands scientists, shows that every hydropower project has the potential to affect attainment of applicable water quality standards. *Amici* discuss in order: the scope of existing hydropower development; the design and operation of such projects; water quality certifications; and the impacts of hydropower projects on water quality.

A. Existing Hydropower Development of Nation's Waters

FERC regulates all operating non-federal dams that generate electrical energy anywhere in the U.S.[8] Its jurisdiction extends to each hydropower project that meets at least one of the following tests: (1) occupancy of federal public land; (2) regulation of a navigable stream; (3) use of surplus water or water power from a federal dam; or (4) if the dam was constructed after August 26, 1935, any effect on interstate commerce, including linkage of the project to the grid. *See*

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[8] The U.S. Bureau of Reclamation, Army Corps of Engineers, Tennessee Valley Authority, and Bonneville Power Administration own and operate federal dams which are not subject to FERC's jurisdiction. These account for roughly 44% of the hydropower capacity in the nation; the balance belongs to licensed projects. *See* FERC, *Water Power—Present Development of Conventional Hydropower Projects, available at* www.ferc.gov/industries/hydropower/gen-info/water-power/wp-present-dev.asp (last updated May 31, 2005).

16 U.S.C. § 797. Its jurisdiction includes any project that, in addition to electrical generation, serves other functions such as water supply or flood control. Today, FERC regulates 1,016 projects[9] through licenses and 617 through exemptions.[10] The licensed projects are located in forty-five states, excluding only Delaware, Mississippi, North and South Dakota, and Hawaii.[11]

Each license has a term of 30 to 50 years. *See* 16 U.S.C. § 803; 18 C.F.R. § 5.18(b)(2). Before expiration, FERC determines whether to issue or deny a new license. *See* 16 U.S.C. § 808. FERC issued 239 new or subsequent licenses between November 1995 and November 2005. *See* Appendix B. More than 125 licenses will expire over the next decade, making those projects subject to relicensing and water quality certification. *See* Appendix C;[12] *see also* 18 C.F.R. §§ 4.34(b)(5)(i), 5.23(b).

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[9] A project may include more than one dam. For instance, Alabama Power Company's Coosa River Project currently includes five individual dams. *See* Alabama Power Company, *Application for New License (P. No. 2146)* A-1 (2005), *available at* http://www.ferc.gov/docs-filing/elibrary.asp (eLibrary no. 2005728-4003). Thus, the number of *dams* under FERC's licenses substantially exceeds 1,016.

[10] An exemption is a short form of license. It applies only to small projects with capacity of five megawatts or less. 18 C.F.R. § 4.60. Unlike a license, it has a perpetual term. This brief focuses on licenses, since an exempt project is not subject to a relicensing proceeding.

[11] *See* FERC, *Hydroelectric Projects under Commission License* (2005), *available at* www.ferc.gov/industries/hydropower/gen-info/licenses.xls; FERC, *Outstanding Exemptions as of 07/08/05*, *available at* http://www.ferc.gov/industries/hydropower/gen-info/exemptions.xls.

[12] *Amici* compiled this appendix from FERC's spreadsheet, *Hydroelectric Projects under Commission License*, *supra*. The search logic identified all projects whose licenses expire between January 1, 2006, and January 1, 2016.

B. Design and Operation of Licensed Hydropower Projects

The projects at issue are 5 out of 1,016 existing projects licensed by FERC. Their fundamental design and operation are common, although the details (including scale) vary significantly from project to project.

A hydropower project converts the energy of flowing water into electricity. It consists of several common elements. A *dam*, weir, or other facility diverts water from its natural course in a river. The dam stores water in a *reservoir* or pond. A *spillway* conveys flow over or through the dam during periods of non-generation, or when the incoming flow exceeds the combined generation capacity of the powerhouse and available storage capacity of the reservoir. An *intake* uses gravity to deliver the diverted water from the reservoir to a powerhouse. It may be located at the reservoir surface or underwater. A *powerhouse*, which may be located in the dam itself or downstream, consists of at least one turbine that converts the kinetic energy of falling water into mechanical energy. The spinning turbine drives a generator, which converts mechanical energy to electricity. A *bypass reach* is any length of river between the dam and a powerhouse. A *tailrace* conveys discharged flow from a powerhouse back to the river channel. A *transmission line* transports the electricity from the powerhouse to the grid or other point of use. *See* J. Gulliver & R.E.A. Arndt, *Hydropower Engineering Handbook* 1.12-1.14 (1991). A license covers a "complete unit of development," 16 U.S.C. § 796(11), which consists of those facilities and property rights in lands and waters necessary for construction, operation, and maintenance of the project, 16 U.S.C. § 802.

Because electricity cannot be stored in any conventional manner, a hydropower project—like any generation source—operates to supply grid demand on an instantaneous basis.

The licensee regulates the diversion of water from the dam to the powerhouse on that same basis.

> [T]he two basic functions of dams are to store water and raise water levels. The storage ability of dams allows runoff to be retained for subsequent controlled release, whereas the ability to raise upstream water levels . . . increases hydraulic head for hydropower generation . . . . The most common classification of operational characteristics divides dams into two groups, storage and run-of-river, based in large part on these functional differences.

N.L. Poff and D.D. Hart, *How Dams Vary and Why It Matters for the Emerging Science of Dam Removal*, 52 BioScience 659, 661-2 (2002).

A *run-of-river* project may modify flow pattern on a short-term (for example, hourly or daily) basis—but not over a longer term, due to limited physical storage capacity or operating rules that preclude storage. *See* H. Rochester et al., *Physical Impacts of Small-Scale Hydroelectric Facilities and Their Effects on Fish and Wildlife* 141 (1984) (U.S. Fish and Wildlife Service FWS/OBS-84/19); EPA, *1993 Dam Report*, *supra*, Ch. 6. Warren's dams range from 14 to 50 feet in height, store variously from 8 to 197 acre-feet[13] of water, and operate in this manner.[14] *See* Pet. App. at A-75-77.

A *storage* project allows the powerhouse to draft from its reservoir upon demand rather than rely on incoming flow. It typically stores flood or other high flows for use in drier periods, or at night for use during the day. The effect of a storage project is to "suppress the natural extremes of spate

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[13] An acre-foot is the volume of water (325,851 gallons) which covers an acre to one foot of depth.

[14] Warren's licenses allow impoundment levels to vary within one foot of full pond under normal operating conditions. *See* Pet. App. A-78. Warren has exclusive control over such variation.

and drought and make the *annual* flow patterns more uniform. Short-term fluctuations may, however be quite violent . . . ." T. E. Langford, *Electricity Generation and the Ecology of Natural Waters* 26 (1983); U.S. Army Corps of Engineers, *Hydropower: Value To The Nation* 5 (2001) *available at* http://www.corpsresults.us/pdfs/Hydropower.pdf [hereinafter *Hydropower Value*]. Because water supply is limited, such a project typically operates during periods of peak electricity demand, such as summer afternoons for air conditioning, or when project power is otherwise cheaper to dispatch than the next available generation source. Most licensed projects use storage in this manner. *See* EPA, *1993 Dam Report*, *supra*; Army Corps, *Hydropower Value*, *supra*, at 5.

Licensed hydropower projects differ in design and operation. Variables such as flow pattern, weather, topography, electricity demand, and even marketing strategy cause these differences. For example, the generation capacities at licensed projects vary by more than six orders of magnitude: the smallest is 1 kilowatt ("KW") at Spring Creek Project in Washington State, while the largest is 2,515.5 megawatts ("MW") at the Niagara Falls Project. *See* FERC, *Hydroelectric Projects under Commission License*, *supra*. Dam heights range from a few feet to 750 feet at the Oroville Project in California's Central Valley. *See* California Department of Water Resources, *Application for New License (P. No. 2100)* (2005) (eLibrary no. 2005128-0067) [hereinafter, *P. No. 2100 License Application*]. Bypass reaches range from a few hundred feet to more 20 miles at the Coosa River Project in Alabama. *See* Alabama Power Co., *Application for New License (P. No. 2146)* A-2 (2005) (eLibrary no. 2005728-4003) [hereinafter, *P. No. 2146 License Application*]. Reservoir sizes range from under 50 acre-feet to more than 2 million acre-feet at the Oroville Project. *See P. No. 2100 License Application*, *supra*. Powerhouse discharges

range from a few cubic feet per second ("c.f.s.") to more than 115,000 c.f.s. at the Niagara Falls Project. *See, e.g.*, New York Power Authority, *Application for New License (P-2216)* A-15 (2005) (eLibrary no. 20050819-0070).

C. Water Quality Standards

Warren seeks to limit the application of Section 401 to a point source which discharges a pollutant, defined to mean "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." CWA section 502(6), 33 U.S.C. § 1362(6). *See* Pet. Br. at 15. Leaving aside the merits of its interpretation of Section 401, the purpose and scope of water quality standards under the Clean Water Act are plainly broader than such pollutant discharges.

The objective of the Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*, is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." *Id.*, § 1251(a). The goal is to achieve, "whenever attainable," "water quality which provides for the protection and propagation of fish, shellfish, and wildlife." *Id.* § 1251(a)(2). Pursuant to Section 303, 33 U.S.C. § 1313, each State adopts and implements water quality standards applicable to navigable waters within its borders, subject to EPA's oversight and approval. Such standards consist of designated beneficial uses, narrative and numeric criteria (such as a dissolved oxygen level), and an anti-degradation policy. 33 U.S.C. §§ 1313(c)(2)(A), 1313(d)(4)(B); 40 C.F.R. § 131.12. "Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation." 33 U.S.C. § 1313(c)(2)(A). Such stan-

dards "play a central role in a State's water quality management program, which identifies the overall mechanism States use to integrate the various Clean Water Act quality control requirements into a coherent management framework." EPA, *Water Quality Standards Handbook: Second Edition* Int-13 (1994).

Maine has adopted water quality standards for rivers, with additional sub-classifications according to: geography; lakes and ponds; marine and estuarine waters; and groundwater. Me. Rev. Stat. Ann. tit. 38 §§ 464—470; Pet. App. at A-83—A-87. Designated beneficial uses for the affected reaches of the Presumpscot River include drinking water after disinfection, recreation in and on the water, fishing, industrial process and cooling water supply, hydroelectric power generation, navigation, and habitat for fish and other aquatic species. *See* Pet. App. at A-84.

D. Impacts of Hydropower Projects on Attainment of Water Quality Standards

Maine DEP found, and Warren did not dispute, that Warren's projects have affected attainment of these water quality standards on the Presumpscot. Each dam diverts most available flow out of the river channel between the dam and powerhouse. Under the original licenses, these bypass reaches, which range from 300 to 1,075 feet in length (*see* Pet. App. at A-94), were dry whenever the dams did not spill or leak water (*see id.* at A-78). The absence of water flow in these bypass reaches impaired habitat for fish and other aquatic species, one of the river's designated beneficial uses. *See id.* at A-89. Discharges from certain powerhouses in summer months caused exceedances of the dissolved oxygen criteria. *See id.* at A-111—A-112. The projects (as well as other facilities) blocked upstream passage of Atlantic salmon, American shad, alewife, and other anadromous fish. *Id.* at A-89. These impacts on Maine's water quality were the basis for the certifications at issue.

The impacts of Warren's projects on the physical, chemical, and biological integrity of the Presumpscot River fall within the wide range caused by the 1,106 licensed projects potentially affected by this case. The impacts of a given project are a function of the setting, design, the plan of operation including period of storage, the volume of discharge, as well as other variables. *See* EPA, *1975 Dam Report*, *supra*, at 40-41; *1989 Dam Report*, *supra*, at viii; N.L. Poff, *How Dams Vary*, *supra*, at 660. Any impact may cause compound or secondary effects. EPA, *1975 Dam Report*, *supra*, at 10-11; *1989 Dam Report*, *supra*, at iii-ix; *1993 Dam Report*, *supra*, Ch. 6. For example, storage, which reduces flow, may alter the downstream water temperature, reduce dissolved oxygen levels, diminish sediment load, or increase dissolved nutrients and toxic chemicals. Rochester et al., *Physical Impacts of Small-Scale Hydroelectricity*, *supra*, at 61-62.

Amici now address how hydropower projects may affect the physical, chemical, and biological integrity of waters. As directed in Section 101(a), the Clean Water Act seeks to protect such integrity, which is a "condition in which the natural structure and function of ecosystems [are] maintained." *Dubois v. U.S. Dep't of Agriculture*, 102 F.3d 1273, 1294 (1st Cir. 1996). *Amici* underscore that, while such impacts may be beneficial or adverse, EPA, *1989 Dam Report*, *supra*, at iii, this brief highlights the adverse impacts which are the focus of any certification under Section 401.

1. *Physical Integrity*

A hydropower project, which controls flow to generate electricity, affects the physical integrity[15] of the occupied river as a result. Gulliver & Arndt, *Hydropower Engineering*

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[15] *Physical integrity* is the dynamic equilibrium of the flow pattern and landscape (channel, beaches, bars, and flood plain) of a river. W.L. Graf, *Damage Control: Dams and the Physical Integrity of America's Rivers*, 91 *Annals of the Association of American Geographers* 1, at 6 (2001).

Handbook, *supra*, at 1.10. Every dam or diversion reduces the velocity of flow in the upstream river. In turn, the discharge from the powerhouse typically changes the volume and velocity of flow downstream. Every diversion which routes water to a remote powerhouse, including each of Warren's dams, reduces the flow in the bypass reach to spill, leakage, or any minimum flow discharge required by the applicable license. The original licenses for Warren's projects, like many outstanding licenses elsewhere, do not require discharges into the bypass reaches, which often dry up as a result. In sum, a dam changes the "hydraulics of a stream . . . and may upset the natural hydrologic equilibria . . . ." EPA, *1975 Dam Report*, *supra*, at 40.

Water flows in a river in a pattern (also called flow regime) consisting of volume, frequency, and duration.[16] The flow pattern varies by day, season (such as spring snowmelt), and year (such as flood or drought). Low and high volumes—and when and how frequently they occur—directly affect the entire ecosystem, including fish, wildlife, and plant species. The flow pattern is a "master variable" that drives other physical, chemical, and biological resources. B.F. Richter et al., *Ecologically Sustainable Water Management: Managing River Flows for Ecological Integrity*, 13 *Ecological Applications* 206, 207 (2003).

Storage by a hydropower project alters the natural variability of flow in order to attain controlled generation, water supply, and other developmental benefits. Storage allows the discharge of a higher flow during a dry period, or a lower flow when a river would naturally be full, shifting flow in time and magnitude. This alters the natural pattern of wet and dry periods to which aquatic and riparian species are adapted. *See* Richter et al., *Ecologically Sustainable Water Manage-*

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[16] Hydrographs, which are plots of discharge versus time, describe these patterns.

ment, *supra*, at 207. Natural variability may be altogether eliminated in a bypass reach that is dependent on occasional spill, leakage, or a uniform minimum flow discharge. Conversely, the powerhouse discharge may exceed natural variability by causing large and frequent fluctuations in flow. For example, under its new license, the Roanoke River Project in North Carolina discharges a minimum flow of 1,500 c.f.s. to 2,800 c.f.s., depending on the season, for the protection of the downstream aquatic resources; while the powerhouse may discharge 0 c.f.s. up to 19,000 c.f.s. Thus, the regulated flow (inclusive of minimum flow and powerhouse discharges) ranges from 1,500 c.f.s. to more than 20,000 c.f.s. in any given day during non-flood season. By contrast, the intra-day variability of historical flows rarely exceeded 5,000 c.f.s. during that season. While many species are accustomed to periodic floods and droughts, such variation within the span of a single day may be beyond the capacity of some to adapt. *See* S.H. Pearsall et al., *Adaptive Management of Flows in the Lower Roanoke River*, 35 *Environmental Management* 353 (2005).

The discharge directly controls the depth, width, and velocity of water at any given point in a channel. *See* B.F. Richter, *A Spatial Assessment of Hydrologic Alteration within a River* Network (1998), available at http://www.freshwaters.org/pub/pdf/hydroalt.pdf; U.S. Geological Survey, *Historical Backdrop to IFIM* (2003), *available at* http://www.fort.usgs.gov/products/software/ifim/history.asp. These variables in turn control the availability of habitat for any aquatic resource at a given time.[17] *Id.*

In addition to the flow of water, a hydropower project also affects the flow of sediment, including sand and gravel, in a

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[17] Licensees use IFIM and similar scientific methods in relicensing proceedings to predict how incremental changes in the regulated flow discharge will affect the availability of habitat for a specific species of fish.

river. Moving water carries sediment. Upon entering a reservoir, flow loses velocity, and sediment tends to drop to the reservoir bottom. D.L. Vicher & W.H. Hager, *Dam Hydraulics* 235-252 (1998); *see* EPA, *1989 Dam Report*, *supra*, at II-7. Glen Canyon Dam, which traps an estimated 44 million *tons* per year of sediment in Lake Powell, is a dramatic example of this process. *See* E.D. Andrews, *Sediment Transport in the Colorado River Basin, in Colorado River Ecology and Dam Management*, at 68 (1991). Water discharged from the tailrace again has energy needed to transport sediment, but the natural load remains trapped in the reservoir. D.B. Simons & F. Senturk, *Sediment Transport Technology: Water and Sediment Dynamics* 775-803 (1992). It becomes "hungry water," scouring the riverbed below for sediment. G.M. Kondolf, *Hungry Water: Effects of Dams and Gravel Mining on River Channels, in* 21 *Environmental Management*, at 533-551 (1997). In some circumstances, the "hungry water" may strip fine sediment and gravel and erode beaches and bars for hundreds of kilometers downstream of the powerhouse, and in the process leave only very coarse cobbles and boulders armoring the channel bottom. G.P. Williams & M.G. Wolman, U.S. Geological Survey Professional Paper 1286, *Downstream Effects of Dams on Alluvial Rivers* 60 (1984); F. Senturk, *Hydraulics of Dams and Reservoirs* 641-667 (1994).

2. *Chemical Integrity*

A hydropower project affects the chemical integrity of the water through four main processes: thermal stratification, eutrophication, gas supersaturation, and discharge volume.

Thermal stratification occurs in a reservoir when water warmed by solar radiation and exposure to air floats on top of cold, denser water. This process—familiar to summertime swimmers—occurs as a function of seasonal warming, depth

of reservoir, and length of storage time.[18] EPA, *1989 Dam Report, supra*, at II-2; *1993 Dam Report, supra*, Ch. 6. Stratification occurs in at least 40% of the large reservoirs surveyed by EPA. EPA, *1989 Dam Report, supra*, at iv. Thermal stratification has many secondary effects. In the deep, cold layer (hypolimnion) these include: reduction in the dissolved oxygen level as a result of organic matter decomposition; increased nutrient concentrations (both phosphorus and nitrogen); increased dissolved metals; and production of toxic hydrogen sulfide. *Id.* The downstream impacts of discharges from a stratified reservoir depend on where the intake is located. For instance, a deep intake will likely release cold water which is low in dissolved oxygen and elevated in dissolved nutrients and metals. Discharges from up to 50% of large hydropower reservoirs reduce dissolved oxygen in downstream receiving waters. *Id.* at v.

Eutrophication occurs when nutrients from upstream lands or activities, such as agriculture, are added to a reservoir. Sunlight, increased surface area, and slow water movement then stimulate growth of aquatic plants. This process results in the growth of algae (potentially including toxic forms and those which affect odor and taste of water), depletion of dissolved oxygen in deeper parts of the reservoir, and increased concentrations of dissolved iron, manganese, and hydrogen sulfide. EPA, *1989 Dam Report, supra*, at iii-iv, ix, II-5—II-6; EPA, *1993 Dam Report, supra*, Ch. 6. As a result of algae blooms and other secondary effects, eutrophication degrades the suitability of water for the designated uses of drinking supply, recreation, and fish and wildlife habitat. Eutrophication occurs in 78% of large hydropower reservoirs. EPA, *1989 Dam Report, supra*, at v.

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[18] A USGS animation graphically depicts density stratification in Lake Powell on the Colorado River. U.S. Geological Survey, *Lake Powell Animation: 1965 to 2001, available at* http://www.gcmrc.gov/products/water_quality/lp_animation/lp_animation.htm.

Gas supersaturation occurs when air is entrained into water by structural design of the intake, or when the flow is discharged over a spillway into a deep plunge pool. While entrained oxygen may have a beneficial effect, nitrogen is not biologically reactive and may cause gas bubbles (similar to divers' bends) to form in the tissue of vertebrates, including fish, downstream of the discharge. EPA, *1989 Dam Report, supra*, at II-6; D.E. Weitkamp & M. Katz, *A Review of Dissolved-gas Supersaturation Literature, in* 109 *Transactions of the American Fisheries Society*, at 659-702 (1980).

Discharge volume affects the chemistry of receiving waters, as well. Discharge that is reduced relative to the natural hydrograph may result in elevated water temperature downstream during summer months, since temperature is a function of flow volume as well as ambient air temperature. EPA, *1989 Dam Report, supra*, at II-7—II-8. It may also reduce the capacity of the river to assimilate and dilute downstream discharges of pollutants from other sources. High discharge may increase channel scour and bank erosion. *Id.*

3. *Biological Integrity*

Hydropower projects may impair the biological integrity of the rivers they occupy. Along with non-point pollution and invasive species, dams are a main cause for the substantial decline in aquatic, riparian, and wetlands biodiversity. *See* B.F. Richter et al., *Ecologically Sustainable Water Management, supra*, at 206. Today, more than 50% of freshwater mussels are at risk of extinction, as are more than 40% of freshwater fishes and amphibians. *See* The Nature Conservancy, *Precious Heritage: The Status of Biodiversity in the United States* (2005), *available at* http://nature.org/initiatives/freshwater/about/.

Flow alteration by dams is a substantial cause of this decline in species populations. Many aquatic and riparian species have habitat requirements that vary seasonally, and their life histories (for example, reproduction and rearing) are

linked to specific flow patterns to which they have adapted over time. N.L. Poff et al., *The Natural Flow Regime*, 47 *BioScience* 769 (1997). For instance, higher flows during spawning season may cue upstream migration of anadromous fish and also, as they recede, create riparian wetlands suitable for amphibians. *Id.* Pursuant to CWA section 303(d), 33 U.S.C. § 1313(d), EPA instructs the States to consider flow, water depth, and velocity to attain designated beneficial uses such as propagation and protection of aquatic species. EPA, *Water Quality Handbook*, *supra*, at 2-10—2-11. Alteration of flow variability to meet electricity demand even in the absence of associated change in the water chemistry—may reduce availability of suitable habitat and thus impair distribution and population of aquatic species. M.B. Bain et al., *Streamflow Regulation and Fish Community Structure, in* 69 *Ecology*, at 382-392 (1998).

Hydropower projects affect biological integrity through alteration of other physical or chemical conditions of waters. For instance, decreased dissolved oxygen or altered water temperature may exceed the physiological tolerances of native species.[19] A reservoir turns riverine habitat into lake habitat suitable for native or exotic fish adapted to still or warm water. Discharge of cold and nutrient rich water from the hypolimnion of a reservoir may convert downstream warm-water fish habitat into cold-water.[20] For example, the discharge of cold water from the hypolimnion of large dams is a significant contributing factor to the threatened and endangered status of several Colorado River Basin fish listed under the federal Endangered Species Act, because cold water

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[19] Temperature and dissolved oxygen are inversely related: warm water is capable of holding less dissolved oxygen than cold water. Fish, such as trout and salmon, adapted to cold oxygenated water cannot survive in warm water with its lower maximum oxygen levels.

[20] Trout anglers are familiar with very productive tailwater fisheries below large dams.

impairs fish reproduction and rearing. R. Abell, *San Juan River Basin Water Quality and Contaminants Review* 78-79 (1994), *available at* http://www.fws.gov/southwest/sjrip/Documents/DocumentsandReports/waterqualityreviewvol1.pdf. Or discharge of warmed water may adversely affect cold-water fish downstream. Warm-water discharges, following seasonal depletion of available cold water in reservoirs, are a contributing factor to the endangered status of the winter-run Chinook salmon in California's Sacramento Valley. National Marine Fisheries Service, *Status of Sacramento River Winter-run Chinook Salmon*, 59 Fed. Reg. 440 (Jan. 4, 1994); D.K. Nickel *et al.*, *Factors Regulating Shasta Lake (California) Cold Water Accumulation, A Resource For Endangered Salmon Conservation*, 40 *Water Resources Research* W05204 (2004). Impacts of a given project depend on the timing, volume, and chemistry of discharges relative to critical life stages of the specific fish and invertebrate species in the affected waters.

Alteration in sediment transport, and specifically "hungry water" downstream of a hydropower project, may eliminate spawning gravels or erode beach and bar habitat needed for fish spawning and rearing. M. Collier et al., U.S. Geological Survey Circular 1126, *Dams and Rivers: Primer on the Downstream Effects of Dams* (1996). Altered flows of water and sediment also reduce floodplains and shrink channels downstream from dams, resulting in significant impacts on fish and birds that rely on the wetlands and other areas at the margin of channel. P.J. Murphy et al., U.S. Bureau of Reclamation, *The Platte River Channel: History and Restoration* (2005). As shown on the Columbia River, "hungry water" may also reduce cover for fish that depend on turbidity for protection from predators. J.G. Williams et al., *Effects of the Federal Columbia River Power System on Salmonid Populations* (2005).

Hydropower projects may block passage for fish and other aquatic species seeking to migrate to spawn or feed.[21] Warren's projects, along with other downstream facilities on the Presumpscot River, block upstream passage of anadromous fish (Atlantic salmon, American shad, alewife, and blue-black herring) to historic spawning habitat. *See* Pet. App. at A-89. In California, dams at the rim of the Central Valley block 70% of the historic spawning habitat for salmon, steelhead, and other anadromous fish in the Sierra mountains. *See* University of California, *Sierra Nevada Ecosystem Project Report* 125 (1996). Even a small dam of less than one meter in height may block passage for fish with limited leaping capacity and reduce the number of species living in a river. *See* V.J. Santucci et al., *Effects of Multiple Low-Head Dams on Fish, Macroinvertebrates, Habitat and Water Quality in the Fox River, Illinois*, 25 *North American Journal of Fisheries Management*, at 975-992 (2005). A dam of any height blocks the movement of mussels and may block movement of fish upon which some mussels depend for transport during part of their life cycle. *See* G.T. Watters, *Small Dams As Barriers To Freshwater Mussels And Their Hosts*, 75 *Biological Conservation*, at 79-85 (1996). For example, licensed projects are a leading cause for extinction of mussels and snails in the Coosa River tributary to Mobile Bay in Alabama. *See* U.S. Fish & Wildlife Service, *Comments on License Application for P. No. 2146* (2005) (eLibrary no. 20050311-0135). Fish moving downstream, often juveniles for anadromous fish, may also be entrained when they are sucked into the turbines, resulting in injury or death. FERC, *Evaluation of Mitigation Effectiveness at Hydropower Projects: Fish Passage* (2004).

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[21] This impact on fish migration has been recognized for more than a century. Since the 1870s, dams in England, Scotland, and Wales have been built with fish passages to protect salmon and trout populations. Gulliver & Arndt, *Hydropower Engineering Handbook*, *supra*, at 8.2.

II. PETITIONER DISREGARDS THE PLAIN MEANING OF SECTION 401 BY SEEKING TO LIMIT IT TO A POINT SOURCE THAT DISCHARGES POLLUTANTS.

Section 401(a)(1) of the Clean Water Act provides:

> Any applicant for a Federal license or permit to conduct *any activity* including, but not limited to, the construction or operation of facilities, which may result in *any discharge* into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate, that *any such discharge* will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of this title.

33 U.S.C. § 1341(a)(1) (emphasis added). Warren argues that "any discharge" means "any discharge of pollutant from a point source" (Pet. Br. at 16), relying on inferences from Section 502(16), 33 U.S.C. § 1362(16),which defines discharge; Section 502(12), 33 U.S.C. § 1362(12), which defines "discharge of pollutant"; Section 502(14), 33 U.S.C. § 1362(14), which defines "point sources"; Section 402(a), 33 U.S.C. § 1342(a), which refers to "discharge of any pollutant"; and the structure of the statute and the legislative history of the 1970, 1972, and 1977 Clean Water Act amendments. *Amici* will leave the parsing of these complex arguments to Respondent and others. Warren's inferences *do* have a fatal flaw. Section 401, 33 U.S.C. § 1341(a)(1), reads: "any discharge," not "any discharge of a pollutant." It says: "any facility," inclusive of point and other sources of discharge, not "any point source." Plain meaning is just that, not a daisy-chain of inferences.

According to plain meaning, each licensee for an existing project must apply to the appropriate State for certification as a condition of relicensing. EPA interprets Section 401 to apply to such projects, without distinction as to whether they are existing or as yet unbuilt. *See* EPA, *Water Quality Handbook*, *supra*, at 7-10.

III. PETITIONER'S THEORY LARGELY NULLIFIES SECTION 401, BY LIMITING IT TO THE DISCHARGE OF ANY POLLUTANT WHICH IS ALREADY REGULATED UNDER SECTION 402.

Warren argues that Section 401 applies only to a discharge of pollutants from a point source. Pet. Br. at 15. If that is so, Section 401 applies only to a discharge already regulated by an NPDES permit under Section 402.

Section 301(a) prohibits the discharge of pollutants except as permitted by Section 302 (effluent limitations), 306 (national standards of performance), 307 (toxic and pre-treatment standards), 318 (aquaculture), 402 (NPDES permits), and 404 (dredge-and-fill permits), which all concern point sources. 33 U.S.C. §§ 1311(a), 1312, 1316, 1317, 1328, 1342, 1344. Section 402(a)(1), 33 U.S.C. § 1342(a)(1), is the primary permitting authority for a discharge of pollutants from a point source. If Section 401 applies only to the discharge of pollutants from a point source, then it duplicates Section 402(a)(2), which applies to any federally licensed or other point source. This theory effectively nullifies the independent effect of Section 401. Further, Warren cannot explain why Section 301(a)—which prohibits the discharge of a pollutant from a point source except as permitted in Sections 302, 306, 307, 328, 402, and 404—omits Section 401, if indeed Section 401 only applies to such discharge.

IV. WARREN EFFECTIVELY SEEKS TO EXEMPT EXISTING HYDROPOWER PROJECTS FROM MANDATORY REGULATION UNDER THE CLEAN WATER ACT.

Section 402 applies to a point source that discharges pollutants from the outside world. It does not apply to an existing hydropower project which does not discharge pollutants. If, as Warren argues, Section 401 applies conterminously, then existing licensed projects that do not discharge pollutants are not subject to regulation under either Section 401 or 402, regardless of their impacts on the physical, chemical, and biological integrity of a river.

Warren relegates the discharge of "mere flow" (Pet. Br. at 15) to Section 304(f)(2)(F). *See* Pet Br. at 25. But Section 304(f)(2)(F) only requires EPA to develop "information" on the nature and extent of nonpoint sources of pollution and methods and processes for control. 33 U.S.C. § 1314(f)(2).

By reference to *National Wildlife Federation v. Gorsuch*, 693 F.2d 156, 174-5 (D.C. Cir. 1983) (cited in Pet. Br. at 18, 23, 25), Warren also invokes Section 208, which provides for the adoption of areawide waste treatment plans for areas with "urban-industrial concentrations . . . ." 33 U.S.C. § 1288(a). As provided in Section 208(b)(2)(C), 33. U.S.C. § 1288(b)(2)(C), such plans do not expressly address the discharge of flow from any facility, and they may not even apply to hydropower projects located in rural areas. Warren argues that licensed projects which discharge flow but not pollutants would be exempt from mandatory regulation under the Clean Water Act.

V. PETITIONER'S THEORY DISRUPTS A FUNCTIONING SYSTEM OF COOPERATIVE FEDERALISM IN THE REGULATION OF HYDROPOWER.

Section 401, as federal law, is the States' only non-preempted authority to assure that existing hydropower projects

that merely discharge flow attain water quality standards. Warren seeks to strip the States of this authority, on the basis of its non-plain reading of Section 401 and the fear that States will disregard the electricity generation benefits of such projects. *See* Pet. Br. at 15-16. Warren's theory would disrupt a system of cooperative federalism which functions effectively today to assure that electricity generation, water supply, flood control, and other developmental benefits are achieved in a manner that also protects water quality and other non-developmental uses. This system consists of scientific study, settlement, and other forms of cooperation in the development of conditions under the CWA and FPA.

A scientific record is cooperatively developed in each relicensing proceeding as the basis for the new or subsequent license. Not less than five years before expiration of the current license, the licensee must provide public notice of its intent to seek a new license. 16 U.S.C. § 808(b)(1). In consultation with FERC, other agencies, and stakeholders, it develops and implements a plan of study of the affected waters and lands.[22] Under the Integrated Licensing Process adopted in 2003, 16 C.F.R. Part 5, FERC and other agencies cooperate to identify what information they need in the record for their respective decisions. Under State law implementing Section 401(a)(1),[23] the State may compel the licensee to correct

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[22] Among other things, the study assesses the current operations of the project, baseline conditions of each natural resource affected by the project, and the potential impacts of alternative operations (such as an increase in minimum flow discharge) and other mitigation measures. FERC, *Handbook for Hydroelectric Project Licensing and 5MW Exemptions From Licensing* 2-7 – 2-10 (2004).

[23] As provided in Section 401(a)(1), each "[s]uch State . . . shall establish procedures for public notice in the case of all applications for certification by it and, to the extent it deems appropriate, procedures for public hearings in connection with specific applications." 33 U.S.C. §1341(a)(1). For example, a State may adopt implementing procedures which permit

deficiencies in the record as necessary for its certification decision on the new license application.[24] FERC, the State, and other agencies also cooperate to develop the environmental documentation required by the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321 *et seq.*, and State law applicable to the certification decision.[25] They further coordinate the development and public comment on draft conditions under their respective authorities. *See* FERC, *Handbook for Hydroelectric Project Licensing*, *supra* note 22. That cooperation makes a virtue of necessity: FERC and the State each have a legal obligation to have an environmental document and other record as the basis for their respective decisions.

In most disputed relicensing proceedings in the past decade, the licensee and other parties have eventually reached settlement to propose conditions of the new license. Such settlement is submitted for approval as the basis of certification, mandatory conditions under FPA sections 4(e) and 18 (16 U.S.C. §§ 797(e), 811), and the license itself. The State will typically participate in the negotiation and help structure the settlement so as to provide an approvable basis for

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dismissal of a certification request in the absence of adequate information submitted by the applicant, here the licensee.

[24] The licensee submits its new license application, incorporating the study results and its recommendations for a new license, at least two years before expiration of the original license. *See* 16 U.S.C. § 808(c).

[25] Since Section 401 vests the State with exclusive authority to adopt certification conditions which must be incorporated into a license, the State must have whatever environmental documents and records required by State law to support such a binding decision in resource allocation. By contrast, the State may not use State law to require a licensee to provide information, and may not prepare its own environmental document, for any recommended condition submitted under FPA section 10(a) or 10(j), 16 U.S.C. § 803(a), (j); it is not actually making a binding decision, and the FPA preempts State law which might otherwise result in duplicative process for such conditions. *See Sayles Hydro Association et al. v. State Water Resources Control Board*, 985 F.2d 451 (9th Cir. 1993).

certification.[26] It is highly unusual that a challenge to a certification is not settled or is otherwise litigated beyond the state forum that has original jurisdiction for such challenge. *See United States Dep't of the Interior v. FERC*, 952 F.2d 538, 548 (D.C. Cir. 1992); *Roosevelt Campobello Int'l Park v. U.S. Environmental Protection Agency*, 604 F.2d 1041, 1056 (1st Cir. 1982).

Each new license includes conditions for protection, mitigation, and enhancement of environmental quality to comply with current laws, including the Clean Water Act. A certification expresses the State's judgment, based on the scientific record developed in the relicensing proceeding, of how best to attain all designated beneficial uses in the river reaches affected by an individual project. The certifications at issue in this case will assure that these projects correct their original non-attainment of the designated beneficial uses of the Presumpscot as well as the established dissolved oxygen standard (*see* Pet. App. at A-22). Unlike an NPDES permit, which reflects "technology-based limitations" for an entire category of point source, see 33 U.S.C. § 1342, these certifications reflect the idiosyncratic design, operation, and environmental conditions of the projects. Certifications for pro-

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[26] For example, in the relicensing proceedings for hydropower projects on the Raquette, Hudson, Mohawk, Sacandaga, Hoosic, Black, and Oswego Rivers in upstate New York, licensee Niagara Mohawk applied to the New York State Department of Environmental Conservation ("NYSDEC") for certifications. Niagara Mohawk and a conservation group, New York Rivers United, sought administrative rehearing before NYSDEC of the initial certification decisions. *See* NYSDEC, Office of Hearings and Mediation, *Niagara Mohawk Ruling* (April 20, 1994), *available at www.dec.state.ny.us/website/ohms/decis/nimor.htm*. The licensee, NYSDEC staff, and other parties subsequently reached settlements for all projects. NYSDEC incorporated these settlements into amended certifications. With the exception of one pending settlement reached in 2004, FERC has issued new licenses that incorporate the certifications and other conditions provided in the settlements.

jects elsewhere may use different measures to correct the same type of water quality impact. Thus, with respect to dissolved oxygen, projects in the Southeast—where summertime conditions typically cause stratification—may be required to make minimum flow discharges, like Warren, and also to use mechanical devices for reaeration of the flow discharged from the powerhouse. *See, e.g., P. No. 2146 License Application, supra*, 3-34.

States under Section 401, and FERC and other agencies with conditioning authorities under the FPA,[27] have adopted conditions that protect generation capacity of existing projects in a manner that also protects other beneficial uses of these waters. While Warren argues that certifications for its projects will reduce generation by 14% (Pet. Br. at 9), this

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[27] Under FPA section 10(a)(1), 16 U.S.C. § 803(a), the license must assure that a project is best adapted to a comprehensive plan of development of the affected waters for all beneficial uses, including electricity generation, water supply, flood control, recreation, and fish and wildlife. FERC adopts conditions under this authority, taking into account the recommendations of public agencies and other parties in the proceeding. Under FPA section 10(j), 16 U.S.C. § 803(j), FERC adopts recommendations submitted by fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife resources, unless it finds that the recommendations are inconsistent with FPA purposes. FPA section 10(a) and 10(j) are commonly known as "discretionary conditioning authorities," insofar as FERC has discretion what conditions to adopt. *See American Rivers v. FERC*, 201 F.3d 1186, 1204-05 (9th Cir. 2000).

The FPA includes two "mandatory conditioning authorities," Sections 4(e) and 18. Under Section 4(e), 16 U.S.C. § 797(e), the Interior or Agriculture Department may establish conditions for the protection and utilization of any federal reservation, such as a National Forest, occupied by a project. Under Section 18, 16 U.S.C. § 811, the U.S. Department of Interior or Commerce may prescribe (or reserve authority to subsequently prescribe) a fish ladder or other facility for passage of fish. FERC must incorporate any such conditions into a license. *See Escondido Mutual Water Company v. La Jolla Band of Mission Indians*, 466 U.S. 765 (1984); *American Rivers et al. v. FERC*, 187 F.3d 1007 (9th Cir. 1999).

impact reflects original design and operation whereby the dams frequently diverted all flow and dried up the bypass reaches of the Presumpscot. For all new licenses issued from 1986 to 2001, the conditions required under all CWA and FPA authorities reduced generation by an average of only 1.59%, while increasing generation capacity by 4.06%. FERC, *Report on Hydroelectric Licensing Policies, Procedures, and Regulations: Comprehensive Review and Recommendations Pursuant to Section 603 of the Energy Act of 2000* 50 (2001). In exchange for this "modest" impact on electricity benefit, these projects—mostly designed and built generations ago—have been brought into compliance with water quality standards and other current requirements for protection and enhancement of environmental quality. *Id.*

Warren's theory, by exempting existing projects from Section 401, would impair this system of cooperative federalism. While a State would submit recommendations for protection of water quality or other beneficial uses under FPA section 10(a)(1) or 10(j), FERC would have discretion not to adopt such recommendations. Even today, if a State waives Section 401 in a particular proceeding by failing to act timely within one year of request, *see* 33 U.S.C. § 1341(a)(1), FERC believes that it does not have any obligation to assure attainment of water quality standards, or more specifically, to assure that the comprehensive plan it adopts under Section 10(a)(1) is consistent with those standards. *See Gustavus Electric Company*, 109 FERC ¶ 61,105, 61,461 (2004) (P. No. 11659); *Southern California Edison Company*, 113 FERC ¶ 61,063 (2005) (P. No. 1934). FERC has modified or rejected settlements that propose conditions under these discretionary authorities. *See, e.g., Dominion Generation*, 106 FERC ¶ 62,245 (2004) (P. No. 2009). If Warren's theory prevails, a typical licensee and FERC would probably cooperate less with the State in the study plan and the development of conditions for protection of water quality; neither would have an obligation to cooperate in the same manner as today.

Section 401, as interpreted by *Jefferson County PUD*, has motivated the cooperative regulation of hydropower projects to protect all beneficial uses, including electricity generation. While FERC has exclusive authority to issue licenses, Section 401 is the States' non-preempted authority to set minimum flow discharges or other operational conditions necessary for attainment of water quality standards. Given that check-and-balance, FERC and the States have developed procedures and practices, reflected in part in the Integrated Licensing Process, to cooperate effectively in the regulation of such projects.

CONCLUSION

Amici respectfully request that the Court affirm that the discharge of flow from an existing hydropower project is a "discharge" for the purpose of certification under Clean Water Act section 401(a)(1).

Respectfully submitted,

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January 6, 2006

APPENDIX A

Amici Curiae

J. David Allan received his Ph.D. (1971) from the University of Michigan. Following a post-doctoral year at the University of Chicago, he served on the Zoology faculty of the University of Maryland until 1990, when he moved to the University of Michigan, and where he is currently Professor of Conservation Biology and Ecosystem Management in the School of Natural Resources and Environment. Allan has served on study panels of the National Science Foundation and National Research Council, and on committees of the North American Benthological Society, Ecological Society of America, and American Society of Limnology and Oceanography. During 2004 he was a Smith Conservation Fellow with The Nature Conservancy, and he now serves on the Board of Trustees of the Michigan Chapter of TNC. Dr. Allan specializes in the ecology and conservation of rivers. He is the author of *Stream Ecology* and co-author (with C.E. Cushing) of *Streams: Their Ecology & Life*. He has published extensively on topics in community ecology and the influence of land-use on the ecological integrity of rivers. Dr. Allan's current research investigates landscape influences on river ecosystems at locations in Michigan and elsewhere, the factors affecting success of stream restoration, and the effects of altered flow regimes on rivers of the Great Lakes basin.

Michael T. Brett is an associate professor in the Department of Civil and Environmental Engineering at the University of Washington. His research focuses on the limnology of lakes and streams, anthropogenic impacts of nutrient loading on aquatic systems, food web interactions, and reservoir management. He is a member of the American Society of Limnology and Oceanography and the North American Lake Management Society. Michael Brett has published over 40 articles on lake and stream ecology. He received his doc-

torate in limnology from Uppsala University in Uppsala, Sweden.

William L. Graf is Foundation University Professor and Professor of Geography at the University of South Carolina. His specialties include fluvial geomorphology and hydrology, as well as policy for public land and water. His Ph.D. is from the University of Wisconsin, Madison, with a major in physical geography and a minor in water resources management. His research and teaching have focused on river-channel change and human impacts on river processes, including the downstream effects of large dams. He has authored or edited 9 books, more than 130 scientific papers, book chapters, and reports, more than 60 successful grant proposals, and more than 100 public presentations. He is past President of the Association of American Geographers and is a National Associate of the National Academy of Science. He has chaired numerous National Research Council committees dealing with river science and policy. President Clinton appointed him to the Presidential Commission on American Heritage Rivers.

Thomas Meixner is Professor of Hydrochemistry in the Department of Hydrology and Water Resources at the University of Arizona. With a doctoral degree in Hydrology and Water Resources and six years of experience as a professor of Watershed Biogeochemistry at the University of California, Riverside and more recently the University of Arizona, Dr. Meixner's research has focused on the hydrologic controls on water quality, and in particular on how the movement and transport of water affects nutrient availability and ecosystem productivity. Dr. Meixner has overseen over $1 million of research on these processes and published over 20 scientific articles on this topic. He has also served as an adviser to state water quality agencies in Arizona and California on matters of hydrologic controls on water quality and meeting proposed non-point source water quality standards.

Judy L. Meyer is Distinguished Research Professor of Ecology in the Institute of Ecology at the University of Georgia (UGA), Athens, Georgia. She holds a B.S. in Zoology from the University of Michigan, a M.S. in Zoology from the University of Hawaii, and a Ph.D. in Ecology from Cornell University. She has been on the faculty at UGA since 1977. She is an established leader in the field of aquatic ecology who has published over 150 scientific papers on her research on rivers and streams. Her research has focused on ecological processes that maintain water quality, on river and stream food webs, and on the impact of watershed disturbance, urban development, and riparian zone management on river and stream ecosystems. She has served as President of the Ecological Society of America and is a Fellow of the American Association for the Advancement of Science. She is currently a member of the Board on Environmental Studies and Toxicology and has served on the Water Science and Technology Board, both of which are boards of the National Academy of Sciences/National Research Council. She is a member of the Ecological Processes and Effects Committee of the Science Advisory Board of the Environmental Protection Agency. She is the recipient of the 2003 Award of Excellence in Benthic Science from the North American Benthological Society, a scientific society whose members study rivers and streams. Her current research is on urban streams, nitrogen cycling in streams, impacts of excessive sedimentation on aquatic biota, importance of decaying leaves and woody debris in stream ecosystems, impacts of changes in riparian buffer widths on trout streams, and effectiveness of stream restoration practices.

Peter B. Moyle has been studying the ecology and conservation of freshwater and estuarine fishes in California since 1969, including the impacts of dams and diversions. He has documented the declining status of many native species in California, such as coho and Chinook salmon, and has been active in developing conservation strategies for aquatic spe-

cies and ecosystems. He also studies the invasions of alien species and works on strategies for reducing their impacts. He was head of the Delta Native Fishes Recovery Team, a member of the National Research Council's Committee on Endangered and Threatened Fishes in the Klamath River Basin, and a member of the Science Board for the CALFED Ecosystem Restoration Program. He is author/coauthor of over 160 scientific papers and 5 books. His books include *Inland Fishes of California* (2002), the definitive tome on California's freshwater fishes, and the nation's leading ichthyology text (5th edition, 2004). He is a professor of fish biology in the Department of Wildlife, Fish, and Conservation Biology, University of California, Davis, where he teaches basic courses in ichthyology, watershed ecology, and wildlife conservation. He is also associate director of the Center for Watershed Sciences. He currently shares the President's Chair in Undergraduate Education with Jeffrey Mount, Geology.

Sam Pearsall is Director of Science and Roanoke River Project Director for the North Carolina Chapter of The Nature Conservancy, adjunct professor of geography and ecology at the University of North Carolina at Chapel Hill, and adjunct professor at the Duke University Nicholas School of the Environment and Earth Sciences. He was The Nature Conservancy's chief negotiator in the relicensing of FERC Project 2009 owned by Virginia Electric and Power Company. Dr. Pearsall holds advanced degrees in landscape ecology (Geography Department, University of Hawaii, East-West Center fellow) and natural resources policy and planning (Cornell University). He is author of more than 30 technical journal articles and book chapters and a member of several professional associations and societies. His expertise includes the impacts of altered hydrological regimes on southeastern floodplain ecosystems. Dr. Pearsall joins this brief in his capacity as an expert and not in his capacity as an employee or representative of The Nature Conservancy.

N. LeRoy Poff is Associate Professor of Biology at Colorado State University. Dr. Poff is an international leader in the field of "hydro-ecology," the science that examines how streamflow dynamics dictate the structure, function and resilience of stream and river ecosystems. His 70-plus peer-reviewed publications are mostly in this area, and he has given invited Plenary presentations on the subject at several international meetings and workshops in the last four years, including in England, Spain, Australia, South Korea and the United States. Most notably, Dr. Poff was lead author on the highly influential 1997 paper, *The Natural Flow Regime*, which has been cited on average 50 times a year in the peer-reviewed scientific literature and is viewed as a conceptual foundation for river restoration around the world. Dr. Poff is a Fellow of the Aldo Leopold Leadership Society (Ecological Society of America), and he is President-elect of the North American Benthological Society, the leading international science society in stream and river ecology. He has served as a member of the National Research Council Committee on Water Resources that evaluates the scientific programs of the U.S. Geological Society.

S. Geoffrey Schladow is professor of Civil and Environmental Engineering at UC Davis, and Director of the UC Davis Tahoe Environmental Research Center. His research interests include mixing and transport processes in aquatic systems, water quality modeling, and the linkages between fluid mechanics and the determinants of water quality and ecological well-being. He has published widely in the area of the thermal regime of reservoirs and lakes. Professor Schladow is a member of the American Society of Civil Engineers, the American Society for Limnology and Oceanography, and the American Geophysical Union, and is Associate Editor of Water Resources Research. He earned his Bachelor of Engineering in Civil Engineering at the University of Western Australia, his Masters of Engineering in Hydraulic Engineering at the University of California, Berke-

ley, and his Ph.D. in Civil Engineering at the University of Western Australia.

The Association of State Wetland Managers is a 501(c)(3), not-for-profit corporation formed to build the capacity of states in cooperation with the efforts of local governments, not-for-profits, federal agencies, and others to protect and restore wetland and related ecosystems. It conducts "applied science" research and training programs pertaining to wetlands and related floodplain, riparian, and river ecosystems. It has conducted over 50 workshops, symposia, and training sessions over the last 22 years and published more than 30 reports and books. It has conducted national symposia on wetland restoration, workshops on stream restoration, and over a dozen workshops on wetlands and watershed management. Clear Water Act section 401 certification and dam issues have been included in special sessions in a number of these symposia and workshops including a workshop and white paper that focused specifically on scientific issues related to dam removal activities in the Northeast.

APPENDIX B

Projects Licensed between November 30, 1995 and November 30, 2005

	State	Licensing Order	Type Of License	WQ Certification
1.	KY	Louisville Gas and Electric Company, 113 FERC ¶ 62,078, 2005 WL 2800096 (2005) (P. No. 289-013)	New	Waived
2.	NY	Erie Boulevard Hydropower, L.P., 113 FERC ¶ 62,079, 2005 WL 2800097 (2005) (P. No. 7387-019)	New	Yes
3.	NC	Coxlake Carbonton Associates, LLC, 113 FERC ¶ 62,004, 2005 WL 2437745 (2005) (P. No. 3155-027, -028)	Subsequent	Yes
4.	WI	Fox Paper Company and N.E.W. Hydro, Inc., 112 FERC ¶ 62,187, 2005 WL 2129126 (2005) (P. No. 7264-010)	Subsequent	Yes
5.	WI	Flambeau Hydro LLC, 112 FERC ¶ 62,130, 2005 WL 1926933 (2005) (P. No. 2064-004)	New	Yes
6.	IL	Price Dam Partnership, Limited, 112 FERC ¶ 62,090, 2005 WL 1794070 (2005) (P. No. 12187-000)	Original	Yes

	State	Licensing Order	Type Of License	WQ Certifi-cation
7.	WA	Public Utility District No. 1 of Pend Oreille County, 112 FERC ¶ 61,055, 2005 WL 1609337 (2005) (P. No. 2042-013)	New	Yes
8.	PA	PPL Holtwood, LLC, 112 FERC ¶ 62,012, 2005 WL 1596690 (2005) (P. No. 487-034)	New	Yes
9.	OR	Portland General Electric Company and Confederated Tribes of the Warm Springs Reservation of Oregon, 111 FERC ¶ 61,450, 2005 WL 1459997 (2005) (P. No. 2030-036)	New	Yes
10.	VT	Central Vermont Public Service Corporation, 111 FERC ¶ 62,313, 2005 WL 1428792 (2005) (P. No. 2205-006)	New	Waived
11.	UT	Monroe City, 111 FERC P 62,247, 2005 WL 1315043 (2005) (P. No. 632-009)	Subse-quent	Yes
12.	IL	Midwest Hydro, Inc., 111 FERC ¶ 61,327, 2005 WL 1301790 (2005) (P. No. 287-009)	New	Waived
13.	WI	Northern States Power Company, 111 FERC ¶ 62,212, 2005 WL 1233222 (2005) (P. No. 2181-014)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
14.	WI	Northern States Power Company, 111 FERC ¶ 62,123, 2005 WL 1031393 (2005) (P. No. 2697-014)	New	Yes
15.	WI	Neshkoro Power Associates, LLC, 111 FERC ¶ 62,099, 2005 WL 951212 (2005) (P. No. 12449-000)	Original	Waived
16.	WI	Mosinee Paper Corporation, 111 FERC ¶ 62,033, 2005 WL 778750 (2005) (P. No. 2207-009)	New	Yes
17.	ID	Idaho Power Company, 110 FERC ¶ 61,345, 2005 WL 681940 (2005) (P. No 2726-012)	New	Yes
18.	WI	International Paper Company, 110 FERC ¶ 62,239, 2005 WL 556012 (2005) (P. No. 4914-010)	Subsequent	Yes
19.	WI	Wisconsin Public Service Corporation, 110 FERC ¶ 62,215, 2005 WL 510778 (2005) (P. No. 1979-012)	New	Yes
20.	ME	Merimil Limited Partnership, 110 FERC ¶ 61,240, 2005 WL 510785 (2005) (P. No. 2574-032)	New	Yes
21.	WI	PCA Hydro Inc., 110 FERC ¶ 62,010, 2005 WL 23971 (2005) (P. No. 2180-007)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
22.	MI	City of Norway, Michigan, 110 FERC ¶ 62,011, 2005 WL 23975 (2005) (P. No. 2720-036)	New	Yes
23.	GA	Georgia Power Company, 109 FERC ¶ 62,246, 2004 WL 2980839 (2004) (P. No. 2177-053)	New	Yes
24.	ME	Great Lakes Hydro American, LLC, 109 FERC ¶ 62,230, 2004 WL 2967009 (2004) (P. No. 2634-007)	New	Yes
25.	NY	Erie Boulevard Hydropower, L.P., 109 FERC ¶ 62,141, 2004 WL 2714028 (2004) (P. No. 2474-004)	New	Yes
26.	MN	Ford Motor Company, 109 FERC ¶ 62,102, 2004 WL 2619908 (2004) (P. No. 362-004)	New	Waived
27.	ID	Fall River Rural Electric Cooperative, Inc., 109 FERC ¶ 62,077, 2004 WL 2491824 (2004) (P. No. 1413-032)	Subsequent	Waived
28.	AK	Gustavus Electric Company, 109 FERC ¶ 61,105, 2004 WL 2430246 (2004) (P. No 11659-002)	New	Waived
29.	PA	Reliant Energy Mid-Atlantic Holdings, LLC, 108 FERC ¶ 62,216, 2004 WL 1955415 (2004) (P. No. 309-036)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
30.	CA	Southern California Edison Company, 108 FERC ¶ 62,217, 2004 WL 1955416 (2004) (P. No. 372-008)	New	Yes
31.	NY	New York State Electric & Gas Company New York, 108 FERC ¶ 62,168, 2004 WL 1843303 (2004) (P. No. 2835-005)	New	Waived
32.	ID	Idaho Power Company, 108 FERC ¶ 61,129, 2004 WL 1740092 (2004) (P. No. 2055-010)	New	Yes
33.	ID	Idaho Power Company, 108 FERC ¶ 61,127, 2004 WL 1740093 (2004) (P. No. 2061-004)	New	Yes
34.	ID	Idaho Power Company, 108 FERC ¶ 61,126, 2004 WL 1740094 (2004) (P. No. 2777-007)	New	Yes
35.	ID	Idaho Power Company, 108 FERC ¶ 61,125, 2004 WL 1740095 (2004) (P. No. 2778-005)	New	Yes
36.	ID	Idaho Power Company, 108 FERC ¶ 61,128, 2004 WL 1760005 (2004) (P. No. 1975-014)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
37.	WA	Puget Sound Energy, Inc., 107 FERC ¶ 61,331, 2004 WL 1472554 (2004) (P. No. 2493-006)	New	Yes
38.	CT	Northeast Generation Services Company, 107 FERC ¶ 61,305, 2004 WL 1400148 (2004) (P. No. 2576-022, 2597-019)	New	Yes
39.	VT	Barton Village, Inc., 107 FERC ¶ 62,217, 2004 WL 1260992 (2004) (P. No. 7725-005)	Subsequent	Yes
40.	WA	Trinity Conservancy, Incorporated, 107 FERC ¶ 62,188, 2004 WL 1174508 (2004) (P. No. 719-007)	Subsequent	Yes
41.	WV	Allegheny Energy Supply Company, LLC, 107 FERC ¶ 62,130, 2004 WL 1060693 (2004) (P. No. 2517-012)	Subsequent	Yes
42.	WV	Allegheny Energy Supply Company, LLC, 107 FERC ¶ 62,131, 2004 WL 1060694 (2004) (P. No. 2516-026)	New	Yes
43.	WI	Dairyland Power Cooperative, 107 FERC ¶ 62,043, 2004 WL 821524 (2004) (P. No. 1960-002)	New	Yes
44.	MN	ALLETE, Inc., 107 FERC ¶ 62,036, 2004 WL 821518 (2004) (P. No. 469-013)	New	Waived

	State	Licensing Order	Type Of License	WQ Certification
45.	ME	Ridgewood Maine Hydro Partners, L.P., 107 FERC ¶ 62,006, 2004 WL 757862 (2004) (P. No. 11472-000)	Original	Yes
46.	NC	Virginia Electric and Power Company, dba Dominion Virginia Power/Dominion North Carolina Power, 106 FERC ¶ 62,245, 2004 WL 715833 (2004) (P. No. 2009-018)	New	Waived
47.	ME	FPL Energy Maine Hydro LLC, 106 FERC ¶ 62,232, 2004 WL 628683 (2004) (P. No. 2612-005)	New	Yes
48.	VT	Village of Lyndonville Electric Department, 106 FERC ¶ 62,187, 2004 WL 473235 (2004) (P. No. 3090-008)	Subsequent	Yes
49.	MN	Northern States Power Company, 106 FERC ¶ 62,185, 2004 WL 424019 (2004) (P. No. 2056-016)	New	Yes
50.	ME	FPL Energy Maine Hydro, LLC, 106 FERC ¶ 62,021, 2004 WL 64089 (2004) (P. No. 2142-031)	New	Yes
51.	NY	New York State Electric & Gas Corporation, 105 FERC ¶ 61,381, 2003 WL 23011910 (2003) (P. No. 2852-015)	New	Yes

	State	Licensing Order	Type Of License	WQ Certifi-cation
52.	AK	Lake Dorothy Hydro, Inc., 105 FERC ¶ 62,223, 2003 WL 23634173 (2003) (P. No. 12379-000)	Original	Yes
53.	ID	PacifiCorp, 105 FERC ¶ 62,207, 2003 WL 22999473 (2003) (P. No. 20-019, 2401-007, 472-017)	New	Yes
54.	ME	Ridgewood Maine Hydro Partners, L.P., 105 FERC ¶ 62,137, 2003 WL 22867429 (2003) (P. No. 11566-000)	Original	Yes
55.	CA	Southern California Edison Company, 105 FERC ¶ 62,146, 2003 WL 22867437 2003) (P. No. 2017-011)	New	Yes
56.	MI	City of Sturgis, Michigan, 105 FERC ¶ 62,132, 2003 WL 22815315 (2003) (P. No. 2964-006)	New	Yes
57.	IL	Marseilles Hydro Power, LLC Marseilles Land and Water Company, 105 FERC ¶ 62,131, 2003 WL 22815316 (2003) (P. No. 12020-000, 11863-000)	Original	Waived
58.	VT	Citizens Utilities Company, 105 FERC ¶ 62,119, 2003 WL 22758081 (2003) (P. No. 2306-008, -024)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
59.	OR	PacifiCorp, 105 FERC ¶ 61,237, 2003 WL 22812428 (2003) (P. No. 1927-008)	New	Yes
60.	UT	Parowan City, 105 FERC ¶ 62,090, 2003 WL 23634169 (2003) (P. No. 1273-009)	Subsequent	Yes
61.	NY	New York Power Authority Massachusetts Municipal Wholesale Electric Company v. Power Authority of the State of New York, 105 FERC ¶ 61,102, 2003 WL 22422346 (2003) (P. No. 2000-036, EL03-224-000)	New	Yes
62.	MI	Charter Township of Ypsilanti, Michigan, 105 FERC ¶ 62,019, 2003 WL 22351633 (2003) (P. No. 5334-019)	New	Yes
63.	MI	City of Hart, Michigan, 105 FERC ¶ 62,004, 2003 WL 22273226 (2003) (P. No. 3516-008)	Subsequent	Yes
64.	ME	S.D. Warren Company, 105 FERC ¶ 61,012, 2003 WL 22273231 (2003) (P. No. 2941-002) SEE, S.D. Warren Company, 105 FERC ¶ 61,013, 2003 WL 22279522 (2003) (P. No. 2897-003, 2932-003, 2941-002, 2931-002, 2942-005)	Subsequent	Yes

	State	Licensing Order	Type Of License	WQ Certification
65.	ME	S.D. Warren Company, 105 FERC ¶ 61,010, 2003 WL 22279523 (2003) (P. No. 2931-002)	Subsequent	Yes
66.	ME	S.D. Warren Company, 105 FERC ¶ 61,011, 2003 WL 22279524 (2003) (P. No. 2932-003)	Subsequent	Yes
67.	ME	S.D. Warren Company, 105 FERC ¶ 61,009, 2003 WL 22279525 (2003) (P. No. 2942-005)	New	Yes
68.	ID	American Falls Reservoir District No. 2 Big Wood Canal Company, 104 FERC ¶ 62,216, 2003 WL 22222703 (2003) (P. No. 12423-000)	Original	Yes
69.	MI	Grande Pointe Power Corporation, 104 FERC ¶ 62,213, 2003 WL 22207024 (2003) (P. No. 11797-000)	Original	Yes
70.	CA	Pacific Gas & Electric Company, 104 FERC ¶ 62,198, 2003 WL 22147514 (2003) (P. No. 1354-005)	New	Waived
71.	CA	Utica Power Authority, 104 FERC ¶ 62,160, 2003 WL 22054283 (2003) (P. No. 2699-001)	Subsequent	Yes

	State	Licensing Order	Type Of License	WQ Certification
72.	CA	Utica Power Authority, 104 FERC ¶ 62,162, 2003 WL 22054284 (2003) (P. No. 2019-017, 2019-023)	New	Yes
73.	CA	Northern California Power Agency, 104 FERC ¶ 62,163, 2003 WL 22054285 (2003) (P. No. 11563-002)	New	Yes
74.	AK	City of Petersburg, Alaska, 104 FERC ¶ 62,151, 2003 WL 22018592 (2003) (P. No. 201-014)	New	Waived
75.	WI	Rhinelander Paper Company, 104 FERC ¶ 62,134, 2003 WL 21979859 (2003) (P. No. 2161-006)	New	Yes
76.	MI	Upper Peninsula Power Company, 104 FERC ¶ 62,135, 2003 WL 21979860 (2003) (P. No. 1864-005)	New	Waived
77.	NY	Orion Power New York GP II, Inc., 104 FERC ¶ 62,118, 2003 WL 21954213 (2003) (P. No. 7000-015)	New	Yes
78.	WI	Consolidated Water Power Company, 104 FERC ¶ 62,070, 2003 WL 21757460 (2003) (P. No. 2110-003)	New	Waived
79.	WI	Consolidated Water Power Company, 104 FERC ¶ 62,071, 2003 WL 21757461 (2003) (P. No. 2192-008)	New	Waived

	State	Licensing Order	Type Of License	WQ Certification
80.	MT	PacifiCorp, 104 FERC ¶ 62,059, 2003 WL 21725991 (2003) (P. No. 2652-007)	New	Yes
81.	ME	Madison Paper Industries, Inc., 104 FERC ¶ 62,061, 2003 WL 21725997 (2003) (P. No. 2364-013)	New	Yes
82.	ME	Madison Paper Industries, Inc., 104 FERC ¶ 62,060, 2003 WL 21725996 (2003) (P. No. 2365-024)	New	Yes
83.	CA	Southern California Edison Company, 104 FERC ¶ 62,048, 2003 WL 21696019 (2003) (P. No. 1934-010)	New	Waived
84.	CA	Southern California Edison Company, 104 FERC ¶ 62,011, 2003 WL 21536024 (2003) (P. No. 1933-010)	New	Yes
85.	CA	Southern California Edison Company, 103 FERC ¶ 62,183, 2003 WL 22208048 (2003) (P. No. 1932-004)	New	Waived
86.	MN	ALLETE, Inc., 103 FERC ¶ 62,114, 2003 WL 21236618 (2003) (P. No. 346-037)	New	Waived
87.	MI	Indiana Michigan Power Company, 103 FERC ¶ 62,025, 2003 WL 1900897 (2003) (P. No. 401-027)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
88.	UT	Parowan City, 103 FERC ¶ 62,015, 2003 WL 1866388 (2003) (P. No. 2782-006)	Subsequent	Yes
89.	CA	Pacific Gas and Electric Company, 102 FERC ¶ 61,309, 2003 WL 1384039 (2003) (P. No. 2687-014)	New	Yes
90.	WI	Oconto Electric Cooperative, 102 FERC ¶ 62,129, 2003 WL 21436783 (2003) (P. No. 1981-010)	New	Yes
91.	CO	Woods Lake Hydro, 102 FERC ¶ 62,120, 2003 WL 732888 (2003) (P. No. 3410-009)	Subsequent	Yes
92.	CO	Judith A. Burford, 102 FERC ¶ 62,004, 2003 WL 42433 (2003) (P. No. 6418-007)	Subsequent	Yes
93.	WI	Northern States Power Company, 101 FERC ¶ 62,211, 2002 WL 31926422 (2002) (P. No. 2567-009)	New	Yes
94.	WI	Northern States Power Company and the City of Eau Claire, Wisconsin, 101 FERC ¶ 62,212, 2002 WL 31926423 (2002) (P. No. 2670-014)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
95.	WI	Northern States Power Company Wisconsin, 101 FERC ¶ 62,213, 2002 WL 31926424 (2002) (P. No. 1982-017)	New	Yes
96.	AR	Entergy Arkansas, Inc., 101 FERC ¶ 62,201, 2002 WL 31926418 (2002) (P. No. 271-062)	New	Yes
97.	ME	FPL Energy Maine Hydro LLC, 101 FERC ¶ 62,179, 2002 WL 31889943 (2002) (P. No. 11834-000)	Original	Yes
98.	UT	City of Springville, 101 FERC ¶ 62,160, 2002 WL 31947868 (2002) (P. No. 2031-046)	New	Yes
99.	NY	Erie Boulevard Hydropower L.P., 101 FERC ¶ 62,090, 2002 WL 31989020 (2002) (P. No. 2616-004, -022)	New	Yes
100.	CA	Pacific Gas and Electric Company, 101 FERC ¶ 61,165, 2002 WL 31973959 (2002) (P. No. 2661-012)	New	Yes
101.	NY	Hydro Development Group, Inc., 101 FERC ¶ 61,097, 2002 WL 31974177 (2002) (P. No. 6058-005)	Subsequent	Yes

	State	Licensing Order	Type Of License	WQ Certification
102.	NY	Hydro Development Group, Inc., 101 FERC ¶ 61,100, 2002 WL 31975584 (2002) (P. No. 6059-006)	Subsequent	Yes
103.	AK	Alaska Power and Telephone Company, 101 FERC ¶ 62,030, 2002 WL 31342026 (2002) (P. No. 11588)	Original	Waived
104.	MI	Upper Peninsula Power Company, 101 FERC ¶ 62,013, 2002 WL 31974418 (2002) (P. No. 10855-002)	Original	Yes
105.	MI	Marquette Board of Light and Power, 101 FERC ¶ 62,014, 2002 WL 31989018 (2002) (P. No. 2589-024, -026)	New	Yes
106.	NY	Erie Boulevard Hydropower L.P., 100 FERC ¶ 62,208, 2002 WL 31993492 (2002) (P. No. 10461-002, 10462-002)	Original	Yes
107.	NY	Hudson River-Black River Regulating District, 100 FERC ¶ 61,319, 2002 WL 31975704 (2002) (P. No. 12252-000)	New	Yes
108.	NY	Erie Boulevard Hydropower, L.P., 100 FERC ¶ 61,320, 2002 WL 31975705 (2002) (P. No. 2554-003, 2554-012)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
109.	NY	Erie Boulevard Hydropower, L.P., 100 FERC ¶ 61,322, 2002 WL 31975708 (2002) (P. No. 2318-002, 2318-011)	New	Yes
110.	NY	Erie Boulevard Hydropower, L.P., 100 FERC ¶ 61,318, 2002 WL 31119053 (2002) (P. No. 2047-004, 2047-011)	New	Yes
111.	NY	Erie Boulevard Hydropower, L.P., 100 FERC ¶ 61,317, 2002 WL 31119052 (2002) (P. No. 2482-014, 2482-029)	New	Yes
112.	WI	Wisconsin Power and Light Company, 99 FERC ¶ 62,225, 2002 WL 1393969 (2002) (P. No. 11162-002)	Original	Waived
113.	SC	South Carolina Electric & Gas Company, 99 FERC ¶ 62,152, 2002 WL 1072297 (2002) (P. No. 1895-007)	New	Yes
114.	ID	Atlanta Power Company, 99 FERC ¶ 62,104, 2002 WL 938911 (2002) (P. No. 11541-001)	Original	Yes
115.	MA	Woronoco Hydro, LLC, 99 FERC ¶ 62,075, 2002 WL 789781 (2002) (P. No. 2631-007)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
116.	NH	USGen New England, Inc., 99 FERC ¶ 62,025, 2002 WL 529393 (2002) (P. No. 2077-016)	New	Yes
117.	SC	Aquenergy Systems, Inc., 99 FERC ¶ 62,019, 2002 WL 505900 (2002) (P. No. 2416-009)	New	Yes
118.	NC	Nantahala Power and Light, 98 FERC ¶ 62,214, 2002 WL 471193 (2002) (P. No. 2694-002)	Subsequent	Yes
119.	WI	City of Black River Falls, Wisconsin, 98 FERC ¶ 62,209, 2002 WL 471194 (2002) (P. No. 3052-003)	Subsequent	Yes
120.	MI	Commonwealth Power Company, 98 FERC ¶ 62,212, 2002 WL 467226 (2002) (P. No. 11300-000)	New	Yes
121.	MI	Commonwealth Power Company, 98 FERC ¶ 62,211, 2002 WL 467227 (2002) (P. No. 11120-002)	New	Yes
122.	MI	Commonwealth Power Company, 98 FERC ¶ 62,210, 2002 WL 467229 (2002) (P. No. 11516-000)	New	Yes
123.	WA	City of Tacoma, Washington, 98 FERC ¶ 61,274, 2002 WL 398311 (2002) (P. No. 2016-044)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
124.	NY	Erie Boulevard Hydropower, L.P., 98 FERC ¶ 61,146, 2002 WL 226233 (2002) (P. No. 2060-005, 002)	New	Yes
125.	NY	Erie Boulevard Hydropower, L.P., 98 FERC ¶ 61,145, 2002 WL 226235 (2002) (P. No. 2084-020, 006)	New	Yes
126.	NY	Erie Boulevard Hydropower, L.P., 98 FERC ¶ 61,149, 2002 WL 226237 (2002) (P. No. 2320-005, 012)	New	Yes
127.	NY	Erie Boulevard Hydropower, L.P., 98 FERC ¶ 61,143, 2002 WL 226241 (2002) (P. No. 2330-007, 2330-033, 2320-012, 2084-006, 2060-002)	New	Yes
128.	OH	City of Hamilton, Ohio, 97 FERC ¶ 62,267, 2001 WL 1638772 (2001) (P. No. 2724-023)	New	Yes
129.	WI	Wisconsin River Power Company, 97 FERC ¶ 62,205, 2001 WL 1559007 (2001) (P. No. 1984-056)	New	Waived
130.	MI	Black River Limited Partnership, 97 FERC ¶ 62,194, 2001 WL 1538052 (2001) (P. No. 11730-00)	Original	Yes

	State	Licensing Order	Type Of License	WQ Certifi-cation
131.	MI	City of St. Louis, Michigan, 97 FERC ¶ 62,184, 2001 WL 1512943 (2001) (P. No. 11428-00)	Original	Waived
132.	NY	Finch, Pruyn and Company, Inc., 97 FERC ¶ 62,170, 2001 WL 1476147 (2001) (P. No. 2385-002)	New	Yes
133.	CA	Pacific Gas & Electric Company, 97 FERC ¶ 61,084, 2001 WL 1297750 (2001) (P. No. 1962-000, 028)	New	Waived
134.	VA	Nekoosa Packaging Corporation, 97 FERC ¶ 62,032, 2001 WL 1215943 (2001) (P. No. 2902-009)	Subse-quent	Waived
135.	VA	Nekoosa Packaging Corporation, 97 FERC ¶ 62,033, 2001 WL 1215944 (2001) (P. No. 2901-008)	New	Waived
136.	CA	Pacific Gas and Electric Company, 97 FERC ¶ 61,031, 2001 WL 1522250 (2001) (P. No. 137-002)	New	Yes
137.	MI	Cameron Gas and Electric Company, 96 FERC ¶ 62,182, 2001 WL 959561 (2001) (P. No. 11150-000)	Original	Waived

	State	Licensing Order	Type Of License	WQ Certification
138.	VT	Central Vermont Public Service Corporation, 96 FERC ¶ 62,097, 2001 WL 870115 (2001) (P. No. 2731-020)	New	Yes
139.	VT	Central Vermont Public Service Corporation, 96 FERC P 62,098, 2001 WL 870116 (2001) (P. No. 2737-002)	New	Yes
140.	GA	Fall Line Hydro Company, Inc., 96 FERC ¶ 62,091, 2001 WL 864315 (2001) (P. No. 11301-001)	New	Yes
141.	GA	Fall Line Hydro Company, Inc., 96 FERC ¶ 62,091 (2001) (P. No. 11301-001)	New	Yes
142.	MI	Consumers Energy Company, 95 FERC ¶ 62,246, 2001 WL 700769 (2001) (P. No. 2566-010)	New	Yes
143.	MI	City of Portland, Michigan, 95 FERC ¶ 62,245, 2001 WL 34077127 (2001) (P. No. 11616-000)	Original	Waived
144.	CO	City and County of Denver, Colorado, 94 FERC ¶ 61,313, 2001 WL 1834126 (2001) (P. No. 2035-006)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
145.	CA	Pacific Gas and Electric Company California, 94 FERC ¶ 62,188, 2001 WL 1834141 (2001) (P. No. 1988-007)	New	Waived
146.	MA	Aquamac Corporation, 94 FERC ¶ 62,182, 2001 WL 1842444 (2001) (P. No. 2927-004)	Subsequent	Waived
147.	MA	Merrimac Paper Company, Inc., 94 FERC ¶ 62,183, 2001 WL 1842445 (2001) (P. No. 2928-004)	Subsequent	Waived
148.	CT	Summit Hydropower, 94 FERC ¶ 61,203, 2001 WL 275412 (2001) (P. No. 10822-000)	Original	Yes
149.	CT	Summit Hydropower, 94 FERC ¶ 61,193, 2001 WL 1439696 (2001) (P. No. 10823-000)	Original	Yes
150.	MI	Wisconsin Electric Power Company, 94 FERC ¶ 61,039, 2001 WL 40124 (2001) (P. No. 11831-000)	New	Yes
151.	MI	Wisconsin Electric Power Company, 94 FERC ¶ 61,040, 2001 WL 40125 (2001) (P. No. 11830-000)	New	Yes
152.	MI	Wisconsin Electric Power Company, 94 FERC ¶ 61,037, 2001 WL 40126 (2001) (P. No. 1759-036,	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
		1980-009, 2072-008, 2073-008, 2074-007, 2131-020, 2471-005, 11830-000, SA98-10-000)		
153.	MI	Wisconsin Electric Power Company, 94 FERC ¶ 61,029, 2001 WL 40127 (2001) (P. No. 1980-009)	New	Yes
154.	MI	Wisconsin Electric Power Company, 94 FERC ¶ 61,041, 2001 WL 40128 (2001) (P. No. 2072-008)	New	Yes
155.	MI	Wisconsin Electric Power Company, 94 FERC ¶ 61,035, 2001 WL 40129 (2001) (P. No. 2073-008)	New	Yes
156.	MI	Wisconsin Electric Power Company, 94 FERC ¶ 61,036, 2001 WL 40132 (2001) (P. No. 2074-007)	New	Yes
157.	MI	Wisconsin Electric Power Company, 94 FERC ¶ 61,028, 2001 WL 40133 (2001) (P. No. 2131-020)	New	Yes
158.	IN	Indiana Michigan Power Company, 94 FERC ¶ 62,035, 2001 WL 1819357 (2001) (P. No. 184-074)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
159.	AK	Alaska Village Electric Cooperative, 93 FERC ¶ 62,190, 2000 WL 1816883 (2000) (P. No. 11690-001)	Original	Waived
160.	OH	Stockport Mill Country Inn Universal Electric Power Corporation, 93 FERC ¶ 62,180, 2000 WL 1791662 (2000) (P. No. 11685-001, 1648-000)	Original	Yes
161.	IL	Metropolitan Water Reclamation District of Greater Chicago Illinois, 93 FERC ¶ 62,080, 2000 WL 1649527 (2000) (P. No. 2866-008)	New	Waived
162.	AK	Haida Corporation, 93 FERC ¶ 62,055, 2000 WL 1594410 (2000) (P. No. 11480-001)	Original	Waived
163.	MT	PP&L Montana, LLC, 92 FERC ¶ 61,261, 2000 WL 1429681 (2000) (P. No. 2188-030)	New	Yes
164.	WY	Lower Valley Energy, Inc., 92 FERC ¶ 62,222, 2000 WL 1310687 (2000) (P. No. 2032-001)	New	Yes
165.	AK	City of Ketchikan, Alaska, 92 FERC ¶ 62,183, 2000 WL 33730159 (2000) (P. No. 420-009)	New	Waived

	State	Licensing Order	Type Of License	WQ Certification
166.	UT	PacifiCorp, 91 FERC ¶ 62,143, 2000 WL 681966 (2000) (P. No. 2722-008)	New	Yes
167.	NY	John M. Skorupski, 91 FERC ¶ 62,070, 2000 WL 523163 (2000) (P. No. 2487-006)	Subsequent	Yes
168.	NY	Curtis/Palmer Hydroelectric Company LP International Paper Company, 91 FERC ¶ 61,112, 2000 WL 502754 (2000) (P. No. 2609-013)	New	Yes
169.	OR	John H. Bigelow, 91 FERC ¶ 62,022, 2000 WL 366448 (2000) (P. No. 11512-000)	Original	Yes
170.	WI	City of Kaukauna, 91 FERC ¶ 62,029, 2000 WL 366450 (2000) (P. No. 2588-004)	New	Yes
171.	ID, MT	Avista Corporation, 90 FERC ¶ 61,167, 2000 WL 216309 (2000) (P. No. 2058-014)	New	Yes
172.	UT	PacifiCorp, 88 FERC ¶ 62,300, 1999 WL 774537 (1999) (P. No. 597-003)	Subsequent	Yes

	State	Licensing Order	Type Of License	WQ Certification
173.	SC	Lockhart Power Company, 88 FERC ¶ 62,301, 1999 WL 774538 (1999) (P. No. 2620-005)	New	Yes
174.	GA	Georgia Power Company, 88 FERC ¶ 62,314, 1999 WL 774553 (1999) (P. No. 1218-014)	New	Yes
175.	RI	Summit Hydropower Incorporated, 88 FERC ¶ 62,298, 1999 WL 768875 (1999) (P. No. 11282-001)	Original	Waived
176.	CT	City of Norwich, Department of Public Utilities, 88 FERC ¶ 62,299, 1999 WL 768874 (1999) (P. No. 11574-000)	Original	Yes
177.	MA	Holyoke Water Power Company Holyoke Gas & Electric Department, Ashburnham Municipal Light Plant, and Massachusetts Municipal Wholesale Electric Company, 88 FERC ¶ 61,186, 1999 WL 637628 (1999) (P. No. 2004-073, 11607-000)	New	Yes
178.	VT	Green Mountain Power Corporation, 88 FERC ¶ 62,095, 1999 WL 553846 (1999) (P. No. 2674-003)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
179.	ME	Kennebec Water District, 88 FERC ¶ 61,117, 1999 WL 549656 (1999) (P. No. 2555-001)	Subsequent	Yes
180.	ME	FPL Energy Maine Hydro LLC, 88 FERC ¶ 61,122, 1999 WL 549658 (1999) (P. No. 2556-004, 2557-004, 2559-003)	New	Yes
181.	ID	City of Bonners Ferry, Idaho, 87 FERC ¶ 62,262, 1999 WL 371938 (1999) (P. No. 1991-009)	New	Yes
182.	UT	Heber Light and Power Company, 87 FERC ¶ 62,155, 1999 WL 281330 (1999) (P. No. 1994-004)	New	Yes
183.	ME	Bangor Hydroelectric Company, 86 FERC ¶ 62,242, 1999 WL 167743 (1999) (P. No. 2666-007)	New	Yes
184.	MN	Crown Hydro Company, 86 FERC ¶ 62,209, 1999 WL 148450 (1999) (P. No. 11175-002)	New	Yes
185.	CA	Southern California Edison Company, 86 FERC ¶ 61,230, 1999 WL 105632 (1999) (P. No. 1390-001)	New	Waived

	State	Licensing Order	Type Of License	WQ Certification
186.	ID	J.M. Miller, Enterprises, Inc., 86 FERC ¶ 62,121, 1999 WL 65057 (1999) (P. No. 11060-001)	Original	Waived
187.	MI	Thunder Bay Power Company, 85 FERC ¶ 62,160, 1998 WL 855083 (1998) (P. No. 2404-017, 2419-007)	New	Yes
188.	OR	City of Albany, Oregon, 85 FERC ¶ 62,046, 1998 WL 804391 (1998) (P. No. 11509-000)	Original	Yes
189.	MI	Wolverine Power Corporation, 85 FERC ¶ 61,063, 1998 WL 721604 (1998) (P. No. 10808-000)	Original	Waived
190.	MI	Wolverine Power Corporation, 85 FERC ¶ 61,064, 1998 WL 721605 (1998) (P. No. 10809-000)	Original	Waived
191.	MI	Wolverine Power Corporation, 85 FERC ¶ 61,065, 1998 WL 721606 (1998) (P. No. 10810-000)	Original	Waived
192.	ME	Otis Hydroelectric Company, 84 FERC ¶ 62,234, 1998 WL 631144 (1998) (P. No. 8277-008)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
193.	ME	International Paper Company, 84 FERC ¶ 62,235, 1998 WL 631146 (1998) (P. No. 2375-013)	New	Yes
194.	MN	City of Thief River Falls Municipal Utilities, 84 FERC ¶ 62,233, 1998 WL 631142 (1998) (P. No. 11546-000)	Original	Yes
195.	ID	Idaho Water Resource Board, 84 FERC ¶ 61,146, 1998 WL 765455 (1998) (P. No. 10819-002)	Original	Yes
196.	WA	City of Tacoma, Washington, 84 FERC ¶ 61,107, 1998 WL 608611 (1998) (P. No. 460-001, -009)	Subsequent	Yes
197.	NE	Nebraska Public Power District, 84 FERC ¶ 61,078, 1998 WL 608590 (1998) (P. No. 1835-013)	New	Yes
198.	NE	Central Nebraska Public Power and Irrigation District, 84 FERC ¶ 61,079, 1998 WL 608591 (1998) (P. No. 1417-001)	New	Yes
199.	CA	Southern California Edison, 83 FERC ¶ 62,241, 1998 WL 319259 (1998) (P. No. 1930-014)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
200.	MN	Minnesota Power and Light Company, Minnesota, 83 FERC ¶ 62,073, 1998 WL 292791 (1998) (P. No. 2663-004)	New	Yes
201.	ME	Bangor Hydro-Electric Company, 83 FERC ¶ 61,037, 1998 WL 292768 (1998) (P. No. 2534-005)	New	Yes
202.	ME	Bangor Hydro-Electric Company, 83 FERC ¶ 61,038, 1998 WL 292769 (1998) (P. No. 2712-004)	New	Yes
203.	ME	Bangor Hydro-Electric Company, 83 FERC ¶ 61,040, 1998 WL 292771 (1998) (P. No. 2403-006, 10981-000)	New	Yes
204.	ME	Central Maine Power Company, 82 FERC ¶ 61,187, 1998 WL 86787 (1998) (P. No. 2529-005)	New	Yes
205.	ME	Central Maine Power Company, 82 FERC ¶ 61,190, 1998 WL 86788 (1998) (P. No. 2527-002)	New	Yes
206.	AK	City of Saxman, Alaska, 82 FERC ¶ 62,041, 1998 WL 20036 (1998) (P. No. 11393-001)	Original	Waived

	State	Licensing Order	Type Of License	WQ Certification
207.	AK	Whitewater Engineering Corporation, Inc., 81 FERC ¶ 62,230, 1997 WL 790491 (1997) (P. No. 11243-002)	Original	Yes
208.	SC	City of Abbeville, 81 FERC ¶ 62,229, 1997 WL 790492 (1997) (P. No. 11286-000)	Original	Yes
209.	WY	Swift Creek Power Company, Inc., 81 FERC ¶ 61,347, 1997 WL 840790 (1997) (P. No. 1651-013)	New	Yes
210.	WA	Puget Sound Energy, Inc., 81 FERC ¶ 61,354, 1997 WL 840792 (1997) (P. No. 2494-002)	Original	Waived
211.	ME	Consolidated Hydro Maine, Inc., 81 FERC ¶ 62,172, 1997 WL 755606 (1997) (P. No. 11163-000)	Original	Yes
212.	ME	Central Maine Power Company, 81 FERC ¶ 61,249, 1997 WL 835137 (1997) (P. No. 2552-007)	Subsequent	Yes
213.	ME	Central Maine Power Company, 81 FERC ¶ 61,251, 1997 WL 835138 (1997) (P. No. 2325-007)	New	Yes
214.	WI	Town of Madison, Department of Electric Works, 81 FERC ¶ 61,252, 1997 WL 732416 (1997) (P. No. 11433-000)	Original	Yes

	State	Licensing Order	Type Of License	WQ Certification
215.	ME	Kennebec Water Power Company, 81 FERC ¶ 61,254, 1997 WL 835139 (1997) (P. No. 2671-002)	New	Yes
216.	ME	Central Maine Power Company, 81 FERC ¶ 61,256, 1997 WL 835140 (1997) (P. No. 2329-005)	New	Yes
217.	WI	N.E.W. Hydro, Inc. City of Oconto Falls, Wisconsin, 81 FERC ¶ 61,238, 1997 WL 723283 (1997) (P. No. 2523-007, 11496-000)	Subsequent	Waived
218.	CT	Summit Hydropower Putnam Hydropower Inc., 81 FERC ¶ 62,089, 1997 WL 663445 (1997) (P. No. 11547-000, 11501-000)	Original	Yes
219.	NY	Rochester Gas and Electric Corporation, 81 FERC ¶ 62,064, 1997 WL 833005 (1997) (P. No. 2584-003)	New	Yes
220.	UT	Monroe City Corporation, 80 FERC ¶ 62,193, 1997 WL 531252 (1997) (P. No. 1517-008)	New	Waived
221.	NY	Felts Mills Energy Partners, L.P., 80 FERC ¶ 61,075, 1997 WL 564546 (1997) (P. No. 4715-006)	Original	Yes

	State	Licensing Order	Type Of License	WQ Certification
222.	ME	Ridgewood Maine Hydro Partners, L.P., 80 FERC ¶ 62,038, 1997 WL 564557 (1997) (P. No. 11482-000)	Original	Yes
223.	WI	Wisconsin Valley Improvement Company, Tomahawk Power and Pulp Company, Wisconsin Public Service Corporation, Weyerhaeuser Company, Consolidated Water Power Company, Nekoosa Papers, Inc., 80 FERC ¶ 61,054, 1997 WL 404237 (1997) (P. No. 2113-041, 042, 047, 2239-009, 2476-003, 1999-006, 2212-003, 2590-004, 2256-004)	New	Waived
224.	NC	Hydro Matrix Partnership, Ltd, 79 FERC ¶ 62,213, 1997 WL 445907 (1997) (P. No. 11437-001)	Original	Yes
225.	WI	Wisconsin Public Service Corporation, 79 FERC ¶ 62,220, 1997 WL 457991 (1997) (P. No. 2581-002)	Subsequent	Waived
226.	MI	Upper Peninsula Power Company, 79 FERC ¶ 62,217, 1997 WL 619694 (1997) (P. No. 10856-002)	Original	Waived
227.	IL	Southwestern Electric Cooperative, Inc., 79 FERC ¶ 62,214, 1997 WL 449932 (1997) (P. No. 11214-001)	Original	Waived

	State	Licensing Order	Type Of License	WQ Certification
228.	WI	Wisconsin Public Service Corporation, 79 FERC ¶ 62,218, 1997 WL 457989 (1997) (P. No. 2560-001)	Subsequent	Yes
229.	WI	Wisconsin Public Service Corporation, 79 FERC ¶ 62,219, 1997 WL 457990 (1997) (P. No. 2525-004)	New	Waived
230.	WI	Wisconsin Public Service Corporation, 79 FERC ¶ 62,222, 1997 WL 457994 (1997) (P. No. 2522-002)	New	Waived
231.	WI	Wisconsin Public Service Corporation, 79 FERC ¶ 62,223, 1997 WL 457995 (1997) (P. No. 2595-005)	New	Waived
232.	WI	Wisconsin Public Service Corporation, 79 FERC ¶ 62,221, 1997 WL 457992 (1997) (P. No. 2546-001)	New	Waived
233.	IN	Star Mill, Inc., 79 FERC ¶ 62,211, 1997 WL 445906 (1997) (P. No. 11291-001)	Original	Yes
234.	NV	Blue Diamond South Pumped Storage Power Company, Inc. and Blue Diamond Power Partners Limited Partnership, 79 FERC ¶ 62,184, 1997 WL 445868 (1997) (P. No. 10756-001)	Original	Waived

	State	Licensing Order	Type Of License	WQ Certification
235.	MT	Continental Hydro Corporation, 79 FERC ¶ 61,292, 1997 WL 438899 (1997) (P. No. 3574-004)	Original	Waived
236.	WI	Wisconsin Power and Light Company, 79 FERC ¶ 61,181, 1997 WL 254324 (1997) (P. No. 710-000)	New	Waived
237.	WI	Midwest Hydraulic Company, Inc., 79 FERC ¶ 62,101, 1997 WL 230213 (1997) (P. No. 10805-002)	Original	Yes
238.	CO	Public Service Company of Colorado, 79 FERC ¶ 61,148, 1997 WL 230203 (1997) (P. No. 2275-001)	Subsequent	Yes
239.	WI	Wisconsin Public Service Corporation, 79 FERC ¶ 62,098, 1997 WL 375650 (1997) (P. No. 2433-004)	New	Waived
240.	WI	Niagara of Wisconsin Paper Corporation, 79 FERC ¶ 62,095, 1997 WL 233924 (1997) (P. No. 2536-009)	New	Waived
241.	WI	Wisconsin Electric Power Company, 79 FERC ¶ 62,096, 1997 WL 375648 (1997) (P. No. 2357-003)	New	Yes
242.	WI	Wisconsin Electric Power Company, 79 FERC ¶ 62,097, 1997 WL 375649 (1997) (P. No. 2394-006)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
243.	MA	Western Massachusetts Electric Company, 79 FERC ¶ 61,007, 1997 WL 164332 (1997) (P. No. 2334-001)	New	Yes
244.	VT, MA	New England Power Company, 79 FERC ¶ 61,006, 1997 WL 164333 (1997) (P. No. 2323-012)	New	Yes
245.	OR	Eugene Water & Electric Board, 78 FERC ¶ 62,207, 1997 WL 129430 (1997) (P. No. 2496-002)	New	Waived
246.	WA	City of Tacoma, Washington, 78 FERC ¶ 62,170, 1997 WL 340217 (1997) (P. No. 1862-009)	New	Yes
247.	WA	City of Centralia Light Department, 78 FERC ¶ 62,171, 1997 WL 99829 (1997) (P. No. 10703-001)	Original	Yes
248.	NY	Seneca Falls Power Corporation, 78 FERC ¶ 62,113, 1997 WL 61518 (1997) (P. No. 2438-007)	New	Yes
249.	WA	Seattle City Light, 78 FERC ¶ 62,097, 1997 WL 48326 (1997) (P. No. 2705-003)	New	Yes
250.	MI	Upper Peninsula Power Company, 78 FERC ¶ 62,100, 1997 WL 276525 (1997) (P. No. 10854-002)	Original	Waived

	State	Licensing Order	Type Of License	WQ Certification
251.	WI	Fraser Papers, Inc., 78 FERC ¶ 62,083, 1997 WL 45991 (1997) (P. No. 2395-003)	Subsequent	Waived
252.	WI	Fraser Papers, Inc., 78 FERC ¶ 62,082, 1997 WL 45992 (1997) (P. No. 2421-003)	Subsequent	Waived
253.	WI	Fraser Papers, Inc., 78 FERC ¶ 62,084, 1997 WL 45993 (1997) (P. No. 2473-002)	Subsequent	Waived
254.	WI	Northern States Power Company of Wisconsin, 78 FERC ¶ 62,087, 1997 WL 45990 (1997) (P. No. 2390-003)	New	Waived
255.	WI	Northern States Power Company of Wisconsin, 78 FERC ¶ 62,086, 1997 WL 45994 (1997) (P. No. 2475-006)	Subsequent	Waived
256.	WI	Fraser Papers, Inc., 78 FERC ¶ 62,085, 1997 WL 45997 (1997) (P. No. 2640-010)	Subsequent	Waived
257.	CA	Southern California Edison Company, 78 FERC ¶ 61,110, 1997 WL 43876 (1997) (P. No. 1388-001)	New	Waived

	State	Licensing Order	Type Of License	WQ Certification
258.	CA	Southern California Edison Company, 78 FERC ¶ 61,109, 1997 WL 43877 (1997) (P. No. 1389-001)	New	Waived
259.	MI	Indiana Michigan Power Company, 77 FERC ¶ 62,207, 1996 WL 768589 (1996) (P. No. 2551-004)	New	Waived
260.	IA	Mitchell County Conservation Board, 77 FERC ¶ 62,202, 1996 WL 879343 (1996) (P. No. 11530-000)	Original	Yes
261.	WI	N.E.W. Hydro, Inc., 77 FERC ¶ 62,200, 1996 WL 879341 (1996) (P. No. 2550-002)	Subsequent	Waived
262.	ME	Ridgewood Maine Hydro Partners, L.P, 77 FERC ¶ 62,201, 1996 WL 879342 (1996) (P. No. 11132-000)	Original	Yes
263.	NY	Beebee Island Corporation, 77 FERC ¶ 61,305, 1996 WL 859373 (1996) (P. No. 2538-001)	New	Yes
264.	NY	Niagara Mohawk Power Corporation, 77 FERC ¶ 61,306, 1996 WL 876071 (1996) (P. No. 2569-004)	New	Yes
265.	CA	Southern California Edison Company, 77 FERC ¶ 61,313, 1996 WL 876078 (1996) (P. No. 2290-006)	New	Yes

	State	Licensing Order	Type Of License	WQ Certification
266.	ID	Indiana Michigan Power Company, 77 FERC ¶ 62,183, 1996 WL 876092 (1996) (P. No. 2579-010)	New	Waived
267.	ME	Great Northern Paper, Inc., 77 FERC ¶ 61,066, 1996 WL 605218 (1996) (P. No. 2572-005)	New	Yes
268.	ME	Great Northern Paper, Inc., 77 FERC ¶ 61,068, 1996 WL 808134 (1996) (P. No. 2458-009)	New	Yes
269.	SC	Georgia Power Company, 77 FERC ¶ 62,002, 1996 WL 560790 (1996) (P. No. 2354-018)	New	Yes
270.	WA	Public Utility District No. 1 of Okanogan County, Washington, 76 FERC ¶ 61,271, 1996 WL 521436 (1996) (P. No. 10536-001)	Original	Yes
271.	NY	Niagara Mohawk Power Corporation, 76 FERC ¶ 61,152, 1996 WL 436594 (1996) (P. No. 2645-029)	New	Yes
272.	WI	Consolidated Water Power Company, 76 FERC ¶ 61,049, 1996 WL 404055 (1996) (P. No. 2590-001)	New	Waived
273.	WI	Wisconsin Valley Improvement Company, 76 FERC ¶ 61,050, 1996 WL 404056 (1996) (P. No. 2113-022)	New	Waived

	State	Licensing Order	Type Of License	WQ Certification
274.	WI	Nekoosa Papers, Inc., 76 FERC ¶ 61,051, 1996 WL 404057 (1996) (P. No. 2292-001)	New	Waived
275.	WI	Nekoosa Papers, Inc., 76 FERC ¶ 61,052, 1996 WL 404049 (1996) (P. No. 2291-001)	New	Waived
276.	WI	Nekoosa Papers, Inc., 76 FERC ¶ 61,053, 1996 WL 411923 (1996) (P. No. 2255-003)	New	Waived
277.	WI	Tomahawk Power and Pulp Company, 76 FERC ¶ 61,055, 1996 WL 404058 (1996) (P. No. 2239-004)	New	Waived
278.	WI	Weyerhaeuser Company, 76 FERC ¶ 61,057, 1996 WL 404050 (1996) (P. No. 2212-001)	New	Waived
279.	WI	Wisconsin Public Service Corporation, 76 FERC ¶ 61,058, 1996 WL 411922 (1996) (P. No. 2476-001)	Subsequent	Waived
280.	WI	Consolidated Water Power Company, 76 FERC ¶ 61,059, 1996 WL 404051 (1996) (P. No. 2256-001)	New	Waived
281.	WI	Wisconsin Public Service Corporation, 76 FERC ¶ 61,056, 1996 WL 404048 (1996) (P. No. 1999-004)	New	Waived

	State	Licensing Order	Type Of License	WQ Certification
282.	AK	Alaska Power and Telephone Company, 76 FERC ¶ 62,032, 1996 WL 401612 (1996) (P. No. 11077-001)	Original	Waived
283.	SC	South Carolina Electric & Gas Company, 75 FERC ¶ 61,308, 1996 WL 331236 (1996) (P. No. 2315-002)	New	Yes
284.	SC	Duke Power Company, 75 FERC ¶ 61,307, 1996 WL 331235 (1996) (P. No. 2331-002)	New	Yes
285.	SC, NC	Duke Power Company, 75 FERC ¶ 61,267, 1996 WL 323743 (1996) (P. No. 2332-003)	New	Yes
286.	NH	Public Service Company of New Hampshire, 75 FERC ¶ 61,111, 1996 WL 208844 (1996) (P. No. 2456-009)	New	Waived
287.	GA	Georgia Power Company, 74 FERC ¶ 62,146, 1996 WL 157949 (1996) (P. No. 1951-037)	New	Yes
288.	NY	Niagara Mohawk Power Company, 74 FERC ¶ 62,138, 1996 WL 127293 (1996) (P. No. 5984-000)	Original	Waived

	State	Licensing Order	Type Of License	WQ Certification
289.	CO	Public Service Company of Colorado, 74 FERC ¶ 62,097, 1996 WL 745106 (1996) (P. No. 2187-002)	Subsequent	Yes
290.	NY	Rochester Gas and Electric Corporation, 74 FERC ¶ 62,091, 1996 WL 108383 (1996) (P. No. 2583-004)	New	Yes
291.	NY	Rochester Gas and Electric Corporation, 74 FERC ¶ 62,090, 1996 WL 118603 (1996) (P. No. 2582-002)	New	Yes
292.	NY	Niagara Mohawk Power Corporation, 74 FERC ¶ 62,087, 1996 WL 92718 (1996) (P. No. 11408-000)	Original	Yes
293.	WI	Wisconsin Electric Power Company, 73 FERC ¶ 61,346, 1995 WL 752015 (1995) (P. No. 2486-002)	New	Waived
294.	SC	Duke Power Company, 73 FERC ¶ 61,330, 1995 WL 902458 (1995) (P. No. 2406)	New	Yes
295.	SC	Duke Power Company, 73 FERC ¶ 61,335, 1995 WL 902463 (1995) (P. No. 2465)	New	Yes
296.	SC	Greenwood County, South Carolina, 73 FERC ¶ 61,336, 1995 WL 902464 (1995) (P. No. 1267)	New	Yes

APPENDIX C

Project Licenses Expiring between January 1, 2006 and January 1, 2016

	State	Licensee	Project Name	Project	Expiration Date
1	NC	Duke Power	West Fork	02686	31-Jan-06
2.	NC	Duke Power	East Fork	02698	31-Jan-06
3	MO	Union Electric Company	Osage	00459	28-Feb-06
4.	NC	Duke Power	Nantahala	02692	28-Feb-06
5.	OR	Pacificorp	Klamath	02082	28-Feb-06
6	SC	South Carolina Public Service Authority	Santee-Cooper	00199	31-Mar-06
7.	NY	New York State Electric & Gas	Saranac River	02738	12-Apr-06
8.	WA	Pacificorp	Merwin	00935	30-Apr-06
9.	WA	Pacificorp	Swift No. 1	02111	30-Apr-06
10.	WA	Puget Sound Energy	Baker	02150	30-Apr-06
11.	WA	PUD No. 1 of Cowlitz County	Swift No. 2	02213	30-Apr-06
12.	WA	PUD No. 1 of Chelan County	Rocky Reach	02145	30-Jun-06
13.	OR	Portland General Electric Company	Clackamas River	02195	31-Aug-06
14.	NY	New York State Electric & Gas	Keuka	02852	30-Nov-06
15.	NY	Erie Boulevard Hydropower	Macomb	07321	30-Nov-06
16.	CO	City & County Of Denver	Williams Fork	02204	31-Dec-06
17	CA	California Department Of Water	Feather River	02100	31-Jan-07
18.	MA	City of Holyoke	Holyoke No. 4	07758	28-Feb-07
19.	CA	Pacific Gas and Electric Company	Kilarc - Cow Creek	00606	27-Mar-07
20.	WI	Flambeau Hydro	Clam River	09185	31-Mar-07
21.	AK	Chugach Electric Association	Cooper Lake	02170	30-Apr-07
22	UT	Garkane Power Association	Boulder Creek	02219	30-Apr-07
23.	WI	Flambeau Hydro	Danbury Dam	09184	9-Jun-07
24.	AL	Alabama Power Company	Mitchell	00082	31-Jul-07
25.	AL	Alabama Power Company	Jordan Dam	00618	31-Jul-07
26.	AL	Alabama Power Company	Coosa River	02146	31-Jul-07
27.	CA	Sacramento Municipal Utility District	Upper American	02101	31-Jul-07
28.	CA	Pacific Gas and Electric Company	Chili Bar	02155	31-Jul-07
29.	WA	Avista Corporation	Spokane River	02545	1-Aug-07
30.	AK	Alaska Power & Telephone Company	Skagway-Dewey	01051	29-Aug-07
31.	AL	Alabama Power Company	John H. Bankhead	02165	31-Aug-07
32.	NY	New York Power Authority	Robert Moses-	02216	31-Aug-07
33.	CA	Southern California Edison Company	Mammoth Pool	02085	30-Nov-07

	State	Licensee	Project Name	Project	Expiration Date
34.	MI	Synex-Michigan	Sanford	02785	30-Nov-07
35.	AK	City & Borough of Sitka	Blue Lake	02230	31-Mar-08
36.	IA	City of Ottumwa	Ottumwa	00925	30-Apr-08
37.	NC	Alcoa Power Generating	Yadkin	02197	30-Apr-08
38.	NC	Progress Energy Carolinas	Yadkin-Pee Dee	02206	30-Apr-08
39.	UT	Hyrum City Corporation	Hyrum	00946	30-Apr-08
40.	VA	Virginia Electric & Power Company	Cushaw	00906	15-Jun-08
41.	GA	Crisp County Power Commission	Lake Blackshear	00659	9-Aug-08
42.	NC	Duke Power	Catawba-Wateree	02232	31-Aug-08
43.	WA	PUD No. 1 of Pend Oreille County	Sullivan Lake	02225	30-Sep-08
44.	OR	City of Eugene	Carmen-Smith	02242	30-Nov-08
45.	CA	Southern California Edison Company	Big Creek No. 2a	00067	28-Feb-09
46.	CA	Southern California Edison Company	Big Creek No. 3	00120	28-Feb-09
47.	CA	Southern California Edison Company	Big Creek No.1 & No.	02175	28-Feb-09
48.	GA	Georgia Power Company	Morgan Falls	02237	28-Feb-09
49.	GA	Eagle & Phoenix Hydro Company	Eagle & Phoenix	02655	28-Feb-09
50.	CA	South Feather Water And Power Agency	South Feather Power	02088	31-Mar-09
51.	GA	Augusta Canal Authority	John P. King Mill	09988	31-May-09
52.	NH	Public Service Company of New	Canaan	07528	31-Jul-09
53.	CO	City of Boulder	Boulder Canyon	01005	31-Aug-09
54.	CA	Pacific Gas and Electric Company	Desabla-Centerville	00803	11-Oct-09
55.	MA	Littleville Power Company	Glendale	02801	31-Oct-09
56.	CA	Moss Richard	Cinnamon Ranch	06885	31-Dec-09
57.	MT	PP&L Montana	Mystic Lake	02301	31-Dec-09
58.	MT	Clark Fork and Blackfoot	Milltown	02543	31-Dec-09
59.	WA	Energy Northwest	Packwood Lake	02244	28-Feb-10
60.	VA	Appalachian Power Company	Smith Mountain	02210	31-Mar-10
61.	MI	Consumers Energy Company	Calkins Bridge	00785	10-Apr-10
62.	CO	Jacobson Eric R.	Ouray	00733	12-Apr-10
63.	CA	Willis Ken	Fire Mountain	01992	30-Apr-10
64.	CO	Public Service Company of Colorado	Tacoma-Ames	00400	30-Jun-10
65.	ID	Idaho Power Company	Swan Falls	00503	30-Jun-10
66.	MO	Union Electric Company	Taum Sauk	02277	30-Jun-10
67.	WI	City of Kaukauna	Badger-Rapide	02677	11-Aug-10
68.	SC	South Carolina Electric & Gas Company	Saluda	00516	31-Aug-10
69.	ID	Mackay Bar Corporation	Hettinger	03041	31-Oct-10
70.	NY	Green Island Power Authority	Green Island	00013	2-Mar-11

	State	Licensee	Project Name	Project	Expiration Date
71.	IN	PSI Energy	Markland	02211	30-Apr-11
72.	MA	Mead Paper Corporation	Willow Mill	02985	30-Apr-11
73.	WA	PUD No. 1 of Snohomish County	Henry M Jackson	02157	31-May-11
74.	VA	Appalachian Power Company	Claytor	00739	30-Jun-11
75.	CA	Pacific Gas and Electric Company	Mccloud-Pit	02106	31-Jul-11
76.	WA	City of Seattle	Boundary	02144	30-Sep-11
77.	MT	Northern Lights	Lake Creek	02594	30-Nov-11
78.	SC	Milliken & Company	Pacolet	02621	31-Jan-12
79.	ME	FPL Energy Maine Hydro	Brassua	02615	31-Mar-12
80	NY	Celtu Tissue Corporation	Natural Dam	02851	31-Mar-12
81.	VT	Omya	Otter Creek	02558	31-Mar-12
82.	NY	Hampshire Paper Company	Emeryville	02850	31-May-12
83.	WA	PUD No. 1 of Douglas County	Wells	02149	31-May-12
84.	CT	Northeast Generation Company	Scotland	02662	31-Aug-12
85.	SC	Inman Mills	Riverdale	04362	31-Aug-12
86	AZ	Salt River Project Agricultural Improvement and Power District	Blue Ridge	02304	31-Dec-12
87.	NY	Erie Boulevard Hydropower	Oswegatchie River	02713	31-Dec-12
88.	CA	Placer County Water Agency	Middle Fork	02079	28-Feb-13
89	NJ	Jersey Central Power & Light Company	Yards Creek	02309	28-Feb-13
90.	CA	Nevada Irrigation District	Yuba-Bear	02266	30-Apr-13
91.	CA	Pacific Gas and Electric Company	Drum-Spaulding	02310	30-Apr-13
92.	AL	Alabama Power Company	Martin Dam	00349	8-Jun-13
93.	TX	Sabine River Authority	Toledo Bend	02305	30-Sep-13
94.	WV	Appalachian Power Company	London/Marmet	01175	31-Jan-14
95.	WV	Appalachian Power Company	Winfield	01290	31-Jan-14
96.	CA	Merced Irrigation District	Mcswain & New	02179	28-Feb-14
97.	CA	Pacific Gas and Electric Company	Merced Falls	02467	28-Feb-14
98.	CO	Public Service Company of Colorado	Cabin Creek	02351	28-Feb-14
99	NE	Loup River Public Power District	Loup Canal	01256	15-Apr-14
100.	NH	Monadnock Paper Mills	Monadnock Paper	06597	31-Jul-14
101.	MI	City of Traverse	Brown Bridge	02978	31-Aug-14
102.	PA	Exelon Generating Company	Muddy Run	02355	31-Aug-14
103.	PA	Philadelphia Electric Power Company	Conowingo	00405	1-Sep-14
104.	PA	PPL Holtwood	Holtwood	01881	1-Sep-14
105.	PA	York Haven Power Company	York Haven	01888	1-Sep-14
106.	GA	Georgia Power Company	Bartletts Ferry	00485	14-Dec-14

	State	Licensee	Project Name	Project	Expiration Date
107.	MI	Antrim County	Elk Rapids	03030	31-Dec-14
108	WI	N.E.W. Hydro	Menominee & Park	02744	28-Feb-15
109.	NC	Bynum Hydro Company	Bynum Dam	04093	30-Apr-15
110	VT	Village of Morrisville	Morrisville	02629	30-Apr-15
111.	NY	Erie Boulevard Hydropower	Chasm	07320	30-Jun-15
112.	WI	Village of Gresham	Weed Dam	02464	30-Jun-15
113.	AL	Alabama Power Company	Holt Lock And Dam	02203	31-Aug-15
114.	NY	Erie Boulevard Hydropower	Hogansburg	07518	30-Sep-15
115.	OK	Grand River Dam Authority	Salina	02524	30-Nov-15
116.	PA	First Energy Generation Corporation	Kinzua	02280	30-Nov-15
117.	OR	Pacificorp	Wallowa Falls	00308	28-Feb-16
118.	ME	Domtar Maine Corporation	Vanceboro (Storage)	02492	1-Mar-16
119.	CO	City Of Loveland	Loveland	02829	8-Mar-16
120.	CA	Yuba County Water Agency	Yuba River	02246	31-Mar-16
121.	CA	Turlock Irrigation District	New Don Pedro	02299	30-Apr-16
122	SC	Clifton Power Corporation	Clifton Mills No 1	04632	31-May-16
123.	NC	Duke Power	Keowee & Jocassee	02503	31-Aug-16
124	NC	Ward Ray F.	Ward Mill Dam	09842	31-Aug-16
125	WI	Wisconsin Public Service Corporation	Tomahawk	01940	31-Dec-16